An Address
ON
THE PROFESSION AND THE GENERAL MEDICAL COUNCIL.

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FELLOW PRACTITIONERS,—The Editors of THE LANCET have kindly placed at my disposal a few valuable columns of their space that in a New Year's Address I may put myself into communication with the profession in England and Wales which I have the honour to represent in the General Medical Council. I have always been of opinion that the chief way in which his constituents can judge as to how a Direct Representative discharges his duty is by reference to the part he plays and the work he does on the Council, but the absence of frequent opportunities of addressing any large number of one's constituents directly at any length on matters affecting the profession makes the use of occasional opportunities of doing so as agreeable to me as it is respectful to you.

I have headed my address "The Profession and the General Medical Council." According to my view the profession is much greater than the General Medical Council and the Council is only great in proportion as it reflects and represents all that is best in the profession. True, it is supposed not to represent the profession only, but the State in its relations to medicine—relations which are growing in number and in gravity every day and which have no slight bearing on the subject of Direct Representation as I shall hope to show. I think the present moment is a peculiarly fit one for reviewing our legal position and considering where we are and what is our duty as a profession. Two or three prosecutions under the Medical Acts have lately taken place in which to ordinary lay minds the accused persons had glaringly violated the penal clauses. I refer particularly to the case of Matthews at Norwich, the Eastburn case in Scotland, and last of all the case of Steel in the county of Durham. The boldest champion of the sufficiency of the existing Acts may well begin to have misgivings and we are all practically agreed that the amendment of the Acts has become urgently necessary if the profession and the public are not to be injured grievously by the defiance of the most arrant quacks under cover of law aping all the functions of medical practitioners, including that of giving certificates of all sorts and quasi-certificates of death, which are accepted generally by the Registration department of the State. This monstrous state of matters is not the only reason why we should seek an amendment of the Medical Acts and review the relations of the State to the profession. There are others. The complete breakdown in the legal provisions for securing universal vaccination and of the public arrangements for teaching students how to vaccinate are among the most grave facts of recent history. In spite of the compliments paid, and honestly paid, by leading statesmen to the medical profession it has still to fight for the due recognition of its rights and of its authority as a factor in legislation. I tried to show at the recent meeting of the General Medical Council how much depends in the present crisis of vaccination lawlessness on the private and quiet influence of the medical profession, and I have no reason to complain greatly that the consideration of this view was rather deferred than rejected by members of the Council and by Sir Richard Thorne himself who naturally believes in the high official view of this great public question. But the full effect of this quiet influence of the profession through its general practitioners is hindered by the small number of such practitioners on the Council as Direct Representatives in proportion to the overwhelming numbers representing teaching and examining bodies. The effect of this "disproportion'd sin" is constantly felt by the Direct Representatives, the more so as there is no direct representation of members in the councils of the individual qualifying bodies and but a very indirect and ineffectual representation in the councils of the universities. No opportunity should be lost of introducing the principle of direct representation into the government of the individual bodies and of extending the direct representation in the General Medical Council. It is only by such extension of the principle that the agitation of those who advocate it can be allayed and that the full and beneficial influence of the profession as a whole can be brought to bear on medical education and on legislation for such amendment of the medical acts as is admitted on all hands to be necessary.

There may be differences of opinion as to the best means of securing the fuller representation of the profession in the General Medical Council. Some advocate a change in the law defining the individual bodies as consisting of Licentiates, Members, and Fellows, or, in the case of the universities, of the whole body of graduates. By this change it is supposed that the practitioners of the country would make themselves felt more effectually in the Government alike of the individual bodies and of the General Medical Council Others look rather to such changes in the charters or in the law as shall introduce direct representation into the medical corporations and extend it in the case of the General Medical Council. My own belief is that the reform will come sooner in the way of direct representation, which having been already conceded by Parliament in the case of the General Medical Council cannot reasonably be withheld in the case of the individual bodies. That the governing councils of these bodies should set themselves against such a reform has always surprised me. The opposition is a survival of the feelings which ruled in the Medical Corporations eighty years ago and which were expressed by Mr. Abernethy as an answer to the just demands of Mr. Wakley and his followers for a reform of the constitution of the Royal College of Surgeons of England. The following words occur in the course of a document presented by Mr. Abernethy and entitled, "Observations in Refutation of Charges publicly made by certain Members of the College against its Legally Constituted Authorities."[1]

"It is represented that the constitution of the College has been the cause of the alleged injuries and grievances.

"The evident object of this representation is the subversion of the present government of the College and the substitution of elections to offices of control and responsibility by members who for the most part exercise the professions of apothecaries and accoucheurs. There can be little doubt that in the event of such an innovation the Institution would soon cease to be a College of Surgeons or of Surgery, and a system of continual intrigue and cabal amongst the profession in general would be introduced."

The existence of such feelings in the heads towards the rank and file of the profession two or three generations back was bad enough; it is now quite indefensible when the apothecary is also a surgeon in the eye of the law, if not a physician also—a point upon which we may have soon an authoritative legal deliverance—when there are no fine lines of demarcation between the different grades of practice, when the difference in the severity of the examinations of the various examining boards is less, and when degree and diploma alike constitute a licence to practise the art of medicine in all its three equal branches. Surely the time is fully come for the governing bodies of our great corporations to do tardy justice to their own members by giving them a voice in the management of their own corporations. Such an act of justice would do more than anything else to harmonise the profession and to raise it in the estimation of the public. It cannot be expected that the public should treat the profession with due respect when universities give their graduates and medical corporations give their members so little function, denying them, as a rule, all "offices of control and responsibility."

The feelings of distrust and disrespect towards the rank and file which are expressed in Mr. Abernethy's Refutation surviving still in the corporations almost necessarily survive in the General Medical Council which is made up so predominantly of the representatives of corporations and universities. But I have been long enough a member of the General Medical Council to believe that they are undergoing insensibly a considerable modification and that with a little more mutual consideration between Official and Direct Representatives a very valuable amount of harmony and coöperation between different sections of the profession would be reached which would tell immensely in advancing

[1] THE LANCET, May 30th, 1896, p. 1514.

medical education and the social and political position of the profession.

It is only fair to say that even with its present constitution the General Medical Council has done something for the profession. It has, with a few regrettable exceptions, given a fair and respectful hearing to the Direct Representatives, it has put them into its various committees and its offices of trust, and it has well-nigh abolished the unqualified assistant. It has presented to the Government a unanimous report on the principles which should regulate legislation on midwives. If these should be adopted by Parliament "quacks" will be abolished, the practice of midwives will be regulated by a board and all doubtful "labours" will quickly be brought under the notice of a registered medical practitioner. The General Medical Council has started fairly on a course for securing a fit preliminary education for those entering the profession. No doubt the Council has been late and long in accomplishing some of this creditable work, but let us generously admit that it has done it and that the chief promoters of it have not all or always been Direct Representatives, though these have taken an important part, and on one memorable occasion had their valuable work somewhat rudely appropriated by others. The General Medical Council further has slowly constructed a set of Standing Orders regulating *inter alia* the procedure of the Council in its penal action against any accused member of the profession and requiring that such accused person shall be supplied with "the particulars" of the charge against him. It has lately, on the motion of Sir Batty Tuke, resolved that no case of complaint shall be considered by the Penal Cases Committee until a statutory declaration as to the facts of the case has been supplied by the complainant. Finally, the General Medical Council with all its faults has some interesting features compared with other medical authorities. Firstly, it is the only medical body which acts openly. Its discussions with few exceptions are open to the public and are reported by the medical press and by a considerable section of the lay press. Secondly, the General Medical Council is in its composition a broad and comprehensive body. It represents all the medical authorities, the Crown, and, though imperfectly, the registered practitioners of the Empire. I would gladly see it a smaller but I should be sorry to see it a less representative body than it is.

These are a few features of the Council which make it an interesting body. However critical we may be we can afford to recognise them and admit that they tend to benefit the profession as well as the public. We may go further and admit that the profession has been benefited. I shall immediately speak of matters needing reform, but I should think it impolitic and unjust to be pessimistic in tone in speaking of the condition of the profession now as compared with the period before the establishment of the General Medical Council and not to recognise improvements in the status of the profession. The numbers in the profession are excessive, but the openings for medical work in the empire have been greatly multiplied by its growth and by reason of the development of sanitary legislation. It is difficult to compare the position of the medical practitioner now with that position prior to the Medical Acts. We are all apt to be oblivious of the grievances of former days and to place our predecessors in idyllic conditions. But I should be sorry to exchange the conditions of the present day with those of the ante-Medical Acts period. There are many hardships now, but they will compare favourably with those of the former period, and I believe the position and the prospects of the medical man who does not adopt pessimistic theories to be better now than it was then. But with every disposition to allow that the General Medical Council is an interesting and useful body and that its action has been such as to improve the education of the profession and its status generally, I must point out in conclusion some much-needed reforms in its own constitution and functions and in the penal clauses of the Medical Act.

THE CONSTITUTION OF THE COUNCIL.

It is too large and it is not sufficiently in touch with those general practitioners for securing the competency of whom it exists. Some of its most eminent members have said almost boastfully that they have never attended a midwifery case. A body which has generally met the demand for an increase in Direct Representation with the blank proposal of the previous question must be defective in its sympathies with a profession from which it derives its own honour and importance. I look upon the creation of the Conjoint Examining Boards by the Act of 1886 as the first step towards a One Portal System under which there will not be the case or the need for the individual representation on the General Medical Council of all the examining bodies conjoined for purposes of examination; they should be conjoined for purposes of representation. This reform would create vacancies which might be filled with new direct representatives. My belief is that both as an educational and a disciplinary body the Council would be improved by such a change in its constitution.

THE FUNCTIONS OF THE COUNCIL.

The supervisory duties of the Council in respect of medical education and the standard of examination have reference only to the maintenance of a minimum standard securing a bare competency to practise. The Council has no power to inspect examinations of a higher class as such or pretending to be of a higher grade. It seems obvious that some body of the profession should have the power and duty of inspecting and reporting on the nature of such ostensibly higher examinations, carrying generally at any rate higher titles than attach to the ordinary diplomas. Surely no body can so fitly be endowed with such powers as the General Medical Council in which by its very constitution all bodies are represented.

THE LAX STATE OF DEATH REGISTRATION.

One of the most urgently needed pieces of legislation is that which would make it essential for the registration of a death to have either the certificate of a registered medical practitioner or that of a coroner as to the cause of death. Pending such legislation there are large districts in which a statement of the cause of death by a herbalist or any other quack seems as valid for registration purposes as the certificate of a medical man. The Council has taken, partly at my instigation, much trouble to bring this amendment about. The President (Sir William Turner) has been most painstaking in his communications with Government. So far nothing effective has been done. But the Council is still vigilant and active in the matter.

THE PENAL CLAUSES OF THE MEDICAL ACTS.

I have already referred to the glaring inefficiency of the 40th clause of the Medical Acts as illustrated in the cases I have mentioned. The failure in some of the cases may have been due to the faulty way in which they have been prepared, but this will not suffice to explain all. The uncertainty of getting a verdict is so great as to invalidate the Medical Act of 1858 in its chief purpose—viz., that of "enabling persons requiring medical aid to distinguish qualified from unqualified practitioners." To facilitate such a distinction is surely the very least that law can do for a profession on which it lays such heavy burdens of education and duty. It should do much more. It should punish not only the assumption of all misleading titles by unqualified practitioners but all practice by them as being essentially against the public interest. Apart from legislation or any change in the constitution of the General Medical Council there are reforms of procedure, penal and general, which would expedite the Council's business. I supported most of the proposals to this effect by Mr. Horsley at the late meeting. I have long urged an enlargement of the Penal Cases Committee and more frequent meetings of it—so far unsuccessfully. Mr. Brown advocated the delegation of the penal business, in the first instance at least, to the Branch Councils. I supported this proposal. But so far we have not succeeded in any plan for making this committee so large and representative as it ought to be. We have, however, succeeded in making it liable to change by annual election.

On the whole I am not hopeless of considerable reforms, even with the present constitution of the Council. But if they are to be achieved two things are necessary. First, that some attempt be made to secure union in the Council and in the profession. If this cannot be procured we may give up all hope of any help from Parliament or Ministers. Unless we appeal to Parliament with a united front we had better abandon all hope of legislation. Next to union in the Council and in the profession our best hope of amendment in the Medical Acts is in making practical proposals. The extreme reformers and the extreme admirers of things as they are neutralise each other and stop all progress. Parliament is heavily handicapped with work and has a great dislike to undertake medical legislation.

Such legislation appeals to no mere party interest, and past and recent experience may well suffice to show us what blind forces may be let loose in opposition to the claims and the authority of those who represent medical science. But if a strong committee could be appointed and could agree on reasonable changes in the Medical Acts we might succeed in getting a short amending Act through. For some of the reforms which I have advocated we can scarcely expect the support of the representatives of the corporate bodies. They will have to be achieved from without. But for others I am not hopeless of such support. The General Medical Council is realising its great functions more and more every year. However small the constituency a member represents he begins to realise that the profession is great and that the Government and the public and the profession itself look to the General Medical Council to perfect its efficiency and its conduct.

A Clinical Lecture

ON

SOME PECULIARITIES IN THE BEHAVIOUR OF CERTAIN MALIGNANT AND INNOCENT GROWTHS.

Delivered at St. George's Hospital

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GENTLEMEN,—There is probably no subject of greater interest to the practical surgeon than the peculiarity which is sometimes seen in the behaviour of certain tumours, especially those which are apparently malignant. The question is one about which little is definitely known; it is, however, of considerable importance in relation to prognoses and treatment and is therefore worthy of some attention. During the past few years the uncertainty which attaches to the course of some of these cases has been brought prominently before me by a succession of instances in my practice some of which I propose to describe in the present lecture with a view to arriving at some practical conclusions. With this object the cases may be usefully divided into three classes: (1) those illustrating the occurrence of tumours which, although apparently malignant, run an innocent course; (2) examples of the occurrence of tumours which, being apparently innocent, prove in the end to be malignant; and (3) cases illustrating the influence of the concentration of the mind of the patient upon the part, in the growth of innocent tumours or in the development of malignant disease.

TUMOURS APPARENTLY MALIGNANT WHICH RUN AN INNOCENT COURSE.

Cases in this category are of two kinds: (1) those in which the growth entirely disappears spontaneously; and (2) those in which it becomes quiescent, assuming a condition which may be conveniently termed "negative malignancy." Each of these classes again consists of two sets of cases—those in which the malignant character is verified by the evidence of the microscope and those in which clinical characteristics alone determine the diagnosis.

TUMOURS APPARENTLY MALIGNANT WHICH ENTIRELY DISAPPEAR SPONTANEOUSLY.

Class 1: The Nature of the Growth Verified by the Microscope.

CASE 1.—A woman, aged thirty-six years, was sent to me on account of an abdominal tumour. It was stated that she had been in good health until her last confinement nine months previously. Although she had had a "bad time" at the confinement nothing happened until a month or two afterwards, when, as she did not appear to regain her usual state of health and complained of abdominal discomfort, an examination was made, with the result that a hard mass was discovered on the right side immediately below the liver. This mass slowly increased and the patient, who was previously robust and rather stout, became weak and greatly emaciated. From time to time there had been a discharge of mucus and slime from the bowel and increasingly obstinate constipation supervened. When I first saw her she was thin and wasted to an extreme degree, the skin over the abdomen was wanting in elasticity; the face was sallow and the general aspect of the patient was that of malignant cachexia. A little to the right of the middle line under the liver was a mass somewhat fixed, irregular in outline, and moving a little with the liver in respiration; over a spot towards its inner side it was very sensitive to the touch. Although in some respects the case was most unpromising it was thought wise in view of the possible onset of intestinal obstruction to make an abdominal exploration. Upon opening the abdomen a large nodulated mass of stony hardness was found in the situation indicated. It appeared to invade the liver, on the upper surface of which, quite distinct from the main tumour, was a roundish nodule of the size of half a walnut of a characteristic malignant appearance; the omentum was involved in the mass and tucked up so that it formed merely a hard compressed irregular lump. To the naked eye the tumour was beyond doubt malignant, but as the growth had been slightly torn in the manipulation a portion was excised for microscopical examination and was subsequently reported to be a typical specimen of mixed round- and spindle-celled sarcoma. The recovery from the immediate effects of the operation was rapid and the gravest possible view having been taken of her case the patient was sent home in the full belief on my part that the remainder of her life must be measured by months only. She did not, however, die, but gradually improved in condition and in eighteen months was a healthy, well-nourished woman in whom no trace of a tumour could be found.

CASE 2.—A woman, aged fifty-two years, was admitted into St. George's Hospital early in 1896 on account of a well-marked melanotic sarcoma of the sole of the foot which was freely excised, the wound healing in the ordinary way. In August of the same year she was admitted under my care with extensive recurrence, for which Symes's amputation was performed on Aug. 18th. On Sept. 19th some small blackish tumours were noticed on the skin along the inner side of the thigh; these increased in size and multiplied until they reached the number of 62. At the same time some hard glands began to appear in Scarpa's triangle; one of the skin nodules was removed and was found to be a typical round-celled sarcoma *without pigment*. The original growth was a well-marked melanotic sarcoma and the recurrent disease of the same kind but less pigmented. A formal consultation was held with regard to the future treatment of the case and it was naturally decided that in a patient who showed such an extreme tendency to dissemination of the disease no further operative measures could achieve any useful end. The case was therefore regarded as hopeless, the patient being recommended to go to the parish infirmary to pass the brief remainder of her life in as much comfort as was practicable. This, however, she declined to do and went to her home. Six months later she came to the hospital in excellent health; the stump was an extremely good one and all the nodules in the thigh had disappeared with the exception of three or four which were hardly perceptible and no enlarged glands in Scarpa's triangle could be felt. She again presented herself subsequently, every trace of the nodules having gone, and when last seen she was in perfect health in all respects.

CASE 3.—I have seen another case exactly similar to the above excepting that the original growth was on the outer side of the dorsum of the foot, the nodules being disposed along the outer side of the leg and the enlarged glands situated in the popliteal space. Spontaneous disappearance of the nodules and gland followed removal; the nodules on the skin were unpigmented.

CASE 4.—This in some respects is one of the most remarkable which have come under my observation. A man, aged forty-eight years, consulted me concerning what was thought to be a hydrocele. The tumour was not larger than an orange and was less oval than usual in hydrocele. It was stated to have existed for nine years, having practically been unchanged in size for the last seven of these. About six weeks before I saw him he had received a slight blow on the tumour which made it a little sensitive. It was tapped after it had existed for five years and a small quantity of clear fluid was said to have come away without causing any

material diminution in the size of the swelling. The tumour was opaque and did not to my mind suggest hydrocele, but the patient would have no interference and, indeed, merely consulted me for advice about the most suitable kind of suspender for the trouble. A year later he came again as, although no increase in size had taken place, he was unable to obtain a satisfactory support. He was therefore anxious for tapping in order to make the thing more manageable. Although I did not expect to effect much by the tapping I introduced a small trocar deeply into the mass which was quite insensitive; a little blood only came away. The tumour clearly was quite solid and having considered the circumstances generally I advised its removal. This course the patient declined unless the malignant nature of the growth could be demonstrated with certainty. As the tumour was so insensitive I introduced a large trocar and cannula and by moving the end of the cannula freely in the substance of the mass succeeded in bringing away some tissue which upon microscopical examination presented appearances characteristic of sarcoma. I feared fungation from the trocar wound, but this healed rapidly and castration having been postponed for a period the tumour slowly decreased in size and in three months had lost half its bulk. I heard subsequently that the testicle had become "very much like the other one, but was quite numb."

CASE 5.—The only case resembling this of which I have heard was one in which a tumour in the scrotum, about the nature of which there was some doubt, was punctured by a fine trocar and cannula and a few drops of blood were withdrawn; a diagnosis of sarcoma was made and removal was advocated, but the tumour slowly disappeared spontaneously after the puncture. No microscopical examination was made but the case was probably of the same nature as the one which I have described.[1]

Class II: The Nature of the Growth estimated by its Clinical Characteristics only.

CASE 6.—A middle-aged man was admitted into St. George's Hospital under the care of Dr. Ewart in August, 1893, on account of pyloric obstruction due to a large growth. He was in the last stage of emaciation and had the cachectic appearance often associated with malignant disease. After a consultation with my colleagues I performed abdominal section and exposed a mass nearly as large as a man's fist involving the pylorus. In the omentum were several hard nodules and under the liver were nodules of a similar kind. The main tumour was of stony hardness, the nodules which were freely manipulated not only by myself but by my colleague, Mr. Dent, who was present at the operation, being equally hard. The appearances of malignant disease were so clear that it was not thought worth while to remove anything for microscopical examination which I now greatly regret. Gastro-jejunostomy was performed. Not only did a rapid recovery from the immediate effects of the operation follow, but the tumour steadily decreased in size until it was imperceptible. The man is still alive and in fair health, the operation having been performed five years and four months ago. The case is additionally interesting from the fact that it is, I believe, the only instance on record in which a patient has survived so long after gastro-enterostomy for what appeared to be undoubted malignant disease.

CASE 7.—A female patient, of middle age, was sent to me on account of a large tumour in the lower part of the neck. She was well nourished but her aspect was somewhat anxious and inclined to sallowness. The skin generally was inelastic, especially about the root of the neck on the sound side. On the right side of the neck low down was a mass apparently glandular which was quite fixed at its lower part, where it extended under the clavicle, becoming continuous with an area of dulness behind the upper end of the sternum. The tumour was insensitive to pressure and excepting its mere existence caused no trouble. There was neither dysphagia nor dyspnœa but over the upper part of the acromion there was an area of anæsthesia as if one of the descending branches of the cervical plexus had been involved. So far as its clinical aspects were concerned the mass seemed undoubtedly malignant and probably secondary to some deep primary lesion. The ultimate result seemed certain and the case was obviously outside the limits of justifiable surgical interference. th erefo re wrote to that effect to the medical attendant, but added that from what I had seen occur in certain similar cases I should not be surprised if the mass were to disappear spontaneously. A few months later I heard that the tumour had become stationary after I saw it and that it did subsequently shrink and practically disappear. I have heard recently that the patient remains well.

Of cases of tumours undoubtedly malignant so far as the clinical characteristics could show which disappeared spontaneously I might give several other examples; the two described are, however, sufficient for my present purpose.

TUMOURS APPARENTLY MALIGNANT WHICH BECOME QUIESCENT, ASSUMING A CONDITION OF NEGATIVE MALIGNANCY.

In the examples of this category I do not propose to include the shrinking or atrophic cancer of old age but shall confine myself to cases of growths which, originating in middle life when the constitutional powers are vigorous, become after a period of activity perfectly passive, neither diminishing nor increasing in bulk and causing no pain or other symptom indicative of life in them. Microscopical evidence of malignancy must of necessity be difficult to obtain in such cases since they are usually those which escape operation either for exploratory or curative purposes. The majority of the cases occur in the female breast, but they are seen elsewhere, more especially in malignant disease of the glands.

CASE 8.—A man, aged forty years, was admitted into St. George's Hospital under my care in June, 1896, on account of a tumour of the right testicle of nine months' growth. The disease seemed obviously malignant and no secondary deposits were found upon his admission. Castration was performed early in July and the growth proved to be "encephaloid carcinoma." The operation wound healed immediately and no abnormal rise of temperature occurred. A week subsequent to the operation a hard mass was indistinctly felt below the liver passing towards the loin. A little later a hard mass developed in the iliac fossa; it was fixed and presented all the clinical characters of a mass of malignant glands. The masses increased in size, but were painless. The temperature was normal and no inflammatory symptoms of any kind were present. The case was regarded as hopeless and the patient left the hospital to go to the seaside where, although he seemed to improve in general health and nutrition, the tumours continued to increase. Six months after the operation there was extensive painless œdema of the right lower limb clearly due to the pressure of the iliac mass; the left lower limb was also slightly swollen; the urine was normal. When I saw the man in this condition I naturally thought that his end was not far off. In this, however, I was mistaken, as about four months later he again showed himself in better health than he had been in since the operation; the œdema of the lower limbs had entirely gone, the mass in the iliac fossa was hardly perceptible, but the sub-hepatic tumour could still be plainly felt. He came under observation again two months later, when the iliac mass had disappeared, whilst the other tumour above had shrunk to about the same size as when it was first discovered. He was specially asked to report himself again if he became worse, but I have heard nothing further of him.

CASE 9.—In 1893 I removed the left mamma of an unmarried woman about thirty-six years of age, on account of a tumour which proved to be a slowly growing scirrhous carcinoma. She remained well until 1896 when the opposite breast showed evidence of malignant disease; it was therefore removed and upon examination it showed a large number of involution cysts and a mass of rapidly growing scirrhus of the size of a walnut. The patient was of splendid moral fibre and placid in disposition; she appeared to attach little or no importance to the disease, so much so that she did not inquire as to its nature and resumed her ordinary occupations and amusements after each operation with commendable energy. Soon after the second operation some hard nodules appeared along the scar of the first operation wound. These were followed by others in the skin of the typical carcinomatous aspect; there were about a dozen in all, the hindermost nodule being only a little in front of the scapular angle. To these she paid no attention. I have recently seen her in perfect health; all the nodules have disappeared excepting one close to the middle of the scar which appears quite harmless. This case affords the nearest approach to the complete spontaneous disappearance of carcinoma which I have up to the present seen.

[1] This case should come in the next class but more conveniently follows immediately upon Case 4.

I have given these cases in some detail because the nature of the primary growth in each was verified by the microscope. It is obvious that had oöphorectomy or any other active treatment been employed in the last case it would have been quoted as an admirable example of the success of the treatment.

CASE 10.—A woman at the age of thirty-six years became the subject of a tumour in the right breast which a surgeon now deceased whose judgment in such cases may be regarded as infallible pronounced to be scirrhus. From the size of a cherry when first discovered it increased to the size of a hen's egg in about eighteen months. It then became slightly smaller and more flattened in shape, the skin at the same time being drawn in towards the tumour. I saw her fifteen years after the original appearance of the disease and she declared that no change of any kind had occurred in that time; she merely consulted me on account of a small boil in the axilla which she thought might possibly be connected with it. The patient was stout and healthy-looking; the tumour was characteristic, freely moveable upon the parts beneath but the skin was adherent over it. As it was at the extreme axillary margin of the breast it might easily have escaped notice altogether. I saw the tumour again five years later; it was unaltered. The patient remained in excellent health until the formation of an acute abdominal abscess, probably pericæcal, which terminated fatally.

It would be easy to give other examples of this kind which I believe are more common than is generally supposed.

CASE 11.—Amongst those cases of which I have had personal experience was that of an old lady who died at a great age with a characteristic scirrhous mass in the right breast which from unimpeachable evidence had remained unchanged for many years.

TUMOURS APPARENTLY INNOCENT WHICH RUN A MALIGNANT COURSE.

Recurrent tumours originally innocent which in the course of years become malignant are not rarely met with—for example, I have recorded a case in the Transactions of the Clinical Society of London in which an innocent fibrous naso-pharyngeal polypus became in the course of about twenty years malignant and finally led to the patient's death. With cases of that kind I am not at present concerned, as in those which I have here in view the change from innocent growth to malignancy is rapid.

CASE 12.—A woman, aged about thirty years, was admitted into St. George's Hospital in February, 1898, with a pedunculated dusky tumour springing apparently from the gum close to the socket of the left anterior molar tooth which had been extracted a few months before. The growth was not larger than a horse-bean and gave rise to no trouble excepting constant bleedings which followed mastication. The appearances were consistent with epulis and the tumour was therefore removed as freely as possible, the actual cautery being thoroughly applied to its point of attachment. Upon microscopical examination the tissue removed was reported to consist merely of granulation tissue. The patient was discharged about the middle of March. In October she presented herself at the hospital again. In the site of the original tumour was a hardish mass of the size of a small walnut which seemed to sprout from the margin of the jaw which was somewhat expanded. No trouble beyond the bleeding similarly associated with the original growth was complained of. A portion of the tumour now removed was reported to be typical of myeloid sarcoma. The mass, together with the portion of the jaw from which it sprang, was removed. No tendency to recurrence has since shown itself. In this case it will be seen that a perfectly innocent type of new growth was succeeded by a sarcoma in less than six months.

CASE 13.—A man of fine physique, forty-two years of age, consulted me with the following history. For a year or more he had been troubled with nasal polypi which had been removed by the surgeon who brought the patient to me. In consequence of the rapid recurrence of the polypi and because they seemed to project into the nose through the opening from the antrum they had been submitted to microscopical examination, with the result that they were pronounced as innocent mucous polypi of the ordinary kind. The cause of a further opinion being sought was a bulging which had recently appeared above the alveolar margin on the left upper jaw which was to my mind suggestive of malignant disease. Electric illumination of the antrum showed nothing positive; it was therefore decided that the bulging portion should be incised for exploratory purposes with the object of obtaining further material for pathological report. At this time beyond the bulging of the jaw above the alveolus there was no evidence of any kind of intra-antral tumour. The exploration was duly made by the surgeon in whose charge the patient was, a little viscid fluid escaping upon the making of the incision; this together with some gelatinous material which was taken away was submitted again for examination, but it afforded nothing in the least suggestive of malignant disease. Shortly after this a polypoid mass was again removed from the nose, but it was much more fibrous in consistence than the previous polypi. Again, the microscope showed no positive evidence of malignancy. Within six weeks of the bulging of the alveolar border referred to there was distinct evidence of antral tumour and I removed the jaw. I can safely say that I have never had to do with a tumour of the upper jaw of a more malignant aspect. The whole bone was soft and infiltrated. Its removal as a whole was out of the question; it was taken away piece by piece. The tumour which evidently sprang from within the antrum was of the consistency of blood clot. The result of microscopical examination of the tumour thus removed was inconclusive, for although the structure of the growth was compatible with sarcoma its variation from the type of innocent tumour was not great, so that a fair prospect of freedom from recurrence was held out. The tumour which had been most freely removed recurred almost before the operation wound had healed, and the patient died partly from exhaustion and partly from symptoms of cerebral tumour within six months.

CASE 14.—A man, aged thirty-three years, was admitted into St. George's Hospital in April, 1898, on account of some "stuffiness" about the back of the throat, inability to breathe through the nose, and occasional epistaxis. Upon examination the naso-pharynx was occupied by a softish nodulated mass which bled moderately after manipulation. As its nature seemed doubtful a fair-sized piece was removed for microscopical examination and was reported to present the appearances of lymphoid tissue only. An operation was therefore performed about a fortnight later as if the case were one of adenoid growth, a large quantity of soft material being removed in all respects identical with the portion previously submitted for microscopical examination. The report upon this was to the effect that although its nature was somewhat doubtful it was compatible with sarcoma. Immediate recurrence followed, extensive glandular enlargement in the neck succeeding.

CASE 15.—I removed from the leg of a female patient, aged about fifty years, a scar resulting from an injury received twenty years before which had become hard and nodulated during the previous six months; the disease had all the appearances of epithelioma. Upon microscopical examination it was reported to consist purely of fibrous tissue without any evidence of malignant structure; many sections were examined with the same result. The patient was therefore assured that the condition was harmless. Within six months of the operation a small nodule appeared at the upper end of the wound; it was a typical specimen of squamous carcinoma.

MENTAL CONCENTRATION UPON A PART AS A FACTOR IN THE INCREASE OR DEVELOPMENT OF NEW GROWTHS.

The tendency of general mental worry towards the development of certain diseases in persons predisposed to them is a matter of common knowledge, the cause in all probability being the resulting diminution in the normal powers of resistance. Little attention has, however, from a surgical standpoint been paid to the effects of continual concentration of the mind of a patient upon a particular site already affected by some abnormal condition. The interest in the matter is not only abstract but it has a practical side of some importance. The following cases will indicate exactly what I mean by the effects of mental concentration.

CASE 16.—A woman, aged thirty-six years, had a small fibro-adenoma on the right breast which had existed for ten years and had undergone no change whatever from the time of its discovery by accident when she was twenty-two years old. It was regarded as being of no consequence; in fact, so little importance did the patient attach to the matter that she said she had really forgotten its existence. She was not a nervous subject in the ordinary sense but was rather easily impressed with the importance

of any subject if forcibly brought to her attention. In conversation with a friend on a certain occasion she was reminded of the tumour and mentioned its existence. Her friend at once appeared much concerned and advised her to seek advice at once or "cancer might result." The word "cancer" alarmed her greatly and appealed to the impressionable side of her disposition. From the time of this conversation she assured me that although she refrained from seeking professional advice her thoughts were seldom if ever removed from the tumour, night after night she lay awake thinking of the terrible possibilities of the lump to which she had previously hardly given a thought. At the end of a fortnight she noticed some pricking pain about it and a month afterwards when she consulted me after a long interval it was certainly as large again as when in its original condition. In spite of reassurances the mental attitude remained unaltered and the tumour continued to increase and was removed. It was an ordinary fibro-adenoma and with the assurance of its innocence after its removal the patient's apprehension was allayed and no further trouble has arisen.

CASE 17.—This is a much more striking instance. A woman, aged about forty years, who had every cause to fear cancer from her family history and other reasons, developed a small cystic tumour in the right breast, at the discovery of which she was greatly alarmed. I have never seen such an exaggerated degree of fear with regard to cancer in any patient. The tumour was removed and proved to be, as was expected, a perfectly innocent cysto-adenoma of the common type. In spite of all reassurances the fear of cancer prevailed and the patient thought of nothing else by day and night beyond the possibility of the disease attacking the spot from which the tumour had been removed. Her mind was, in truth, continually fixed upon the spot and she told me that even when at the theatre or in society, &c., her thoughts were really never removed from the site of her trouble. The scar, otherwise perfectly healthy, became at the end of a month sensitive and she complained perpetually of shooting pain about it. Six months later a hard, indurated mass had developed in the breast at the outer side of the scar from which it was inseparable, the skin being puckered over it. The breast was removed a little later and the growth was a typical scirrhus of rapid growth.

It may of course be said that there is nothing beyond coincidence in these cases and had they been the only equally marked instances with which I have met I should probably be inclined to that view, but I have seen some other equally clear examples like the first case and one other like the second whilst at the present time I have under observation another case which seems likely to end in the same way.

REMARKS ON THE FOREGOING CASES.

In the cases which I have described there is nothing intrinsically remarkable; any surgeon of considerable experience could probably produce an equally characteristic series. Many instances of spontaneous disappearance of abdominal tumours presumably malignant have been from time to time recorded, although in the majority the results of microscopical examination were for sufficient reasons not forthcoming, but I am not aware of any set of cases of so comprehensive a kind as the present having been published. In their selection care has been taken to exclude those in which syphilis or tubercle could in any sense be considered a possible factor and such changes as occurred were quite independent of any medicinal treatment. In the cases in which the disease was subjected to pathological examination it is clear that the microscope was powerless to indicate their future progress although the anatomical characters were plain enough and the innocence or malignancy of the growths had to be determined by their clinical behaviour. It therefore appears that in a certain percentage of cases the histological character of a new growth is no reliable index to its malignancy or the reverse. This is especially emphasised in some of the cases now described as the specimens examined were typical and well defined. The distinction between granulation tissue and certain round-celled sarcomata is sometimes so extremely slight as to amount practically to nothing; so much is this so, indeed, that it is conceivable that the one may be confused with the other even by expert observers, as is shown, for example, by the following case.

CASE 18.—A girl, aged thirteen years, was admitted into St. George's Hospital under my care with some deformity of the humerus just below the surgical neck caused (it was stated) by the bone having been fractured in the same place three times during the previous year by comparatively trivial injuries, a very unusual sequence of events in such a subject who, beyond being rather delicate in appearance, seemed healthy, showing no sign of rickets or any other condition tending to brittleness of the bones. There was slight angular deformity at the spot alluded to and apparently a very large amount of callus. The union appeared to be good. A skiagram was obtained and the mass then appeared to be of the nature of a growth rather than callus. An exploratory operation was therefore performed and the mass was found to consist of a thin shell of bone containing a quantity of dark fluid and lined by a vascular jelly-like material of rather firmer consistence than blood-clot which was readily scraped away from the bony cavity which it lined. The cavity extended so near the shoulder-joint that any resection of the affected portion of the bone seemed inadvisable. As the contents of the cavity presented in aspect, consistence, &c., all the characteristics of malignancy amputation at the shoulder-joint was performed after consultation with one of my colleagues who was present. The microscopical examination of the material removed showed granulation tissue only; it was therefore quite clear that if this evidence was to be relied upon we had done this child a grievous harm in removing the limb. To any one, however, who had seen the growth *in situ* no possible doubt could have presented itself as to its malignancy, and in spite of the microscope revealing the characteristics only of an innocent tumour I am sure our proceeding was right. This belief was to some extent supported by the condition of the child when last seen. Her complexion had assumed a curiously wax-like appearance, the veins about the left upper chest and over the shoulder were much dilated and there was a suggestive area of dulness behind the clavicle. The left side of the chest moved rather less freely than the right, but that of course may possibly have been due to the loss of the use of certain muscles in consequence of the amputation.

The only tumours entirely disappearing spontaneously which have come under my observation have apparently been sarcomatous. I have never seen complete disappearance in a case of undoubted carcinoma, the nearest approach to it being that described in Case 9. As to the causes which lead to the occasional spontaneous disappearance of the sarcomata it is idle at present to speculate, but it certainly seems that actual interference with the integrity of the growth does in some way tend to its disappearance. It can, for instance, be hardly conceivable that the tumour of the testicle described in Case 4 would have disappeared if the exploratory puncture had not been made; the subsidence of the tumour commencing immediately upon the puncture is strong circumstantial evidence in this direction. Moreover, unless my recollection misleads me, I fancy that in the cases in which sarcomatous tumours have been treated by ligaturing the main blood-vessels supplying them the most striking results have followed when the structure of the growth itself has been laid open in the process of finding the vessels. It is a matter of much interest in connexion with this part of the subject that, so far as I know, no sarcoma on the surface of the body has disappeared spontaneously after incision or rupture of its structure; the cases of spontaneous disappearance seem to be limited to the disease when occurring inside a closed cavity like that of the abdomen or tunica vaginalis.

With regard to the cases of quiet carcinoma in the condition of negative malignancy, they are, I fancy, judging from personal experience more common than one would be led to expect from the literature of the subject. I have watched several of such cases occurring in the breast carefully over considerable periods and, assuming for the moment that the removal of carcinoma by operation (speaking generally) is a proper treatment, I believe that the best interests of the patient in cases like these are met by avoiding operation. It is true that it has been stated that if these quiet tumours are left untouched secondary visceral deposits, &c., are more liable to occur, but of this statement I am unacquainted with any proof and certainly the removal of these growths does not always obviate the tendency to subsequent developments, for I well recollect a patient being brought to St. George's Hospital with malignant disease of the vertebral column from whom Mr. Henry Lee had removed a "stony cancer" of the breast, ten years previously, the site of the operation being perfectly free from disease. Not only does the prospect of an

operation often depress the patient and diminish the ordinary constitutional power of resistance, but the handling of the growth in the process of removal is prone to express the cancer juice (I use the term not of course in a scientific sense but because it conveys a very definite meaning), with the possible result of a direct local inoculation. In addition there is, so far as I am aware, no certain evidence to show that in cases of this kind, at all events in the breast, where they most commonly occur, life is prolonged or made in any way more comfortable by the removal of the disease.

The truth is that the proper estimation of the real value of the removal or other treatment in carcinoma is an enormously difficult matter. What, for instance, could have been better evidence of the successful result of oöphorectomy, supposing that treatment had been adopted, than the behaviour of Case 9? Moreover, in certain cases, especially those of the negative kind, the fact that recurrence does not take place for many years affords in reality no strong grounds for argument in favour of removal, as it is known that some of these tumours remain harmless for years when entirely left alone. I must here confess to being one of those who think that the operative treatment of carcinoma is carried to excess at the present time and, in my opinion, much more evidence than we now have at our disposal is required to prove that great benefit is derivable by operation in many of the cases treated. Moreover I think that in the case of the mamma which for surgical purposes provides so many cases of cancer the actual mortality of the disease has been to some extent over-rated, as the bulk of the statistics dealing with the subject merely show the average length of life which follows after the discovery of the disease or upon its removal by operation in those who die from the disease, little or no account being taken of cases in which although cancer may exist the death of the patient is due to causes independent of it, the patients, in fact, dying with the disease but not from it. Of this class of cases I could give several instances in my own experience; in one the condition was only discovered after death, the patient having either been unconscious of its existence or having been successful in concealing it. In another case a patient who died from other causes had a shrunken painless carcinoma of the breast which she had succeeded in concealing for many years.

The cases of tumour histologically innocent at their commencement subsequently pursuing a malignant course are interesting and again show the occasional unreliability as an aid to prognosis of the results of microscopical examination. In the cases related there was no question of the failure in this respect being due to the provision of inadequate "specimens"; in one case the whole growth was submitted and in the others gross pieces taken from the centre of the tumours were provided. In cases like those illustrating the effect of mental concentration upon a part I am strongly of opinion that the increase in the growth of innocent tumours or the development of malignant disease may sometimes be dependent upon the mental attitude of the patient towards the affected spot. In 2 cases of what I have called negative malignancy I have seen tumours which had remained quite unchanged until the patients, previously ignorant of the probable nature of their complaint, unhappily had the suggestion made that the disease might be "cancer." Mental concentration was the result in each case and rapid increase followed.

I am further as sure as it is possible to be in the circumstances that recurrence of malignant disease after removal is not only more certain but more rapid in nervous, susceptible people than in those who are placid and dread less the second on-coming of the disease. In using the term "nervous" here I do not intend it to be identical with "hysterical" in meaning, for it is my impression, without being able to adduce actual statistics to support it, that as a class hysterical subjects are less prone to malignant disease than those who do not belong to that type. By the term "nervous" I mean a certain class of sensitive, impressionable, and often very timid subjects who must be familiar to all practitioners, and it is in these subjects that the effects of mental concentration in the relation now being discussed are seen. Of the difference of the rate of growth in apathetic subjects as compared with that in nervous subjects it would be easy to give examples if time permitted. Case 9 already described is a sufficient illustration of the progress of a carcinoma in an apathetic person. The relatively slow growth and recurrence in some old people as compared with the rapid progress in the young is, I have little doubt, to some extent at all events although of course not entirely, accounted for by the blunted perceptions of the older subjects. Out of this matter a practical question arises. If I am in any sense right in my contention that the increase or development of new growths may in some degree be subject to mental influence what is the proper attitude of the surgeon towards the patient with respect to divulging the actual nature of the disease when it is malignant? On this point there is, I suppose, certain to be some difference of opinion since it is the custom of some surgeons at once to inform the patient of the nature of the disease if certain, or of its suspicious aspect if doubtful, without regard to individual peculiarity or susceptibility, and there can be no doubt that in the strictly abstract moral sense this attitude is from the point of view of the surgeon correct. It is, however, in my judgment certain that in some sensitive dispositions a direct opinion of this kind which is tantamount to a sentence of death may be followed by rapid increase and dissemination of the disease, and I am firm in my conviction that the suggestion sometimes made with regard to the possibility of an innocent growth becoming malignant is in such subjects a direct incentive to the increase of the growth and possibly to the change from innocence to malignancy. It is therefore, I submit, clear that no routine practice should be adopted in this matter but the attitude of the surgeon should, I think, be guided as much by the disposition of the patient as by the apparent nature of the growth. Indeed, in certain individuals, under some circumstances it is, I conceive, justifiable to conceal the nature of the disease, if possible, by deliberate deception, provided that the responsible friends or relatives are made aware of the exact condition of affairs. This question is one of extreme difficulty and requires more discrimination and tact on the part of the surgeon than any ethical question of a similar kind with which I am acquainted.

CONCLUSIONS.

A careful study of a considerable number of cases of which those just described in detail must be taken merely as characteristic examples and not as an entire experience leads me to the following conclusions:—1. That certain tumours although undoubtedly malignant in structure pursue an innocent course and disappear spontaneously. 2. That certain tumours malignant in structure become quiescent, assuming a condition of negative malignancy. 3. That some tumours originally innocent in type pursue a course of extreme malignancy. 4. That microscopical examination in a certain percentage of cases is powerless to determine whether a growth will prove malignant or innocent in its course. 5. That the clinical behaviour of new growths is often a better test of malignancy than microscopical examination. 6. That mental concentration on the part of the patient upon the site of the disease is a distinct factor in stimulating the growth of innocent tumours and in the production of malignant disease in certain susceptible subjects. 7. That in nervous subjects of the type described recurrence of malignant disease after operation is more certain and its growth more rapid than in persons of a placid or apathetic disposition. 8. That evidence is wanting to show that operation in cancerous tumours of the breast which have assumed the condition of negative malignancy is as a rule necessary or advantageous. 9. That although the practice of candidly announcing to patients suffering from malignant disease the nature of their complaint is, speaking generally, moral and salutary it may be modified with advantage in patients of the nervous type already indicated.

In expressing these views I am aware that some of them may be directly opposed to those held by many surgeons. They are, however, deliberately advanced after due consideration. The time at my disposal is only sufficient to enable me to touch the fringe of a subject of considerable magnitude which those who think it worthy of investigation will, I think, find of unusual interest.

BRITISH PHARMACEUTICAL SOCIETY.—The annual meeting of the British Pharmaceutical Society will be held in Plymouth next July. The society visited Plymouth twenty-two years ago and the local committee are already taking steps to ensure the success of the meeting.

ON AN

OUTBREAK OF DIARRHŒA IN THE WARDS OF ST. BARTHOLOMEW'S HOSPITAL,

PROBABLY CAUSED BY INFECTION OF RICE-PUDDING WITH BACILLUS ENTERITIDIS SPOROGENES.

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WITHIN the past three years the wards of St. Bartholomew's Hospital have been thrice visited by a mild form of epidemic diarrhœa. The outbreaks have all been of similar character, occurring suddenly in a single night and passing off as suddenly. In one instance as many as 146 persons were attacked in one night. The cases have occurred almost entirely amongst the patients; the sisters and nurses, with very few exceptions, have escaped. The great majority of the attacks have been mild—merely abdominal pain followed by a few loose actions of the bowels—but in a few of the more severe cases blood and mucus were passed. Vomiting has almost always been absent. No fatal case has occurred and, indeed, no case has been so serious as to excite alarm, except where the patient was previously very ill. On each occasion, besides the actual attacks of diarrhœa there were instances of abdominal pain alone and there was further noted a general tendency to looseness of the bowels—e.g., patients who were habitually constipated had their bowels opened naturally. The distribution of the attacks in the different wards of the hospital has been very capricious. The first outbreak was on the night of Sunday, Oct. 27th, 1895, when there were 59 attacks distributed over 15 wards out of 28; the second was on the night of Sunday, March 6th, 1898, when there were 146 attacks distributed over 22 wards out of 28; and the third was on the night of Friday, August 5th, 1898, and affected 86 persons, distributed over 16 of the 20 wards then open.

In each epidemic the facts irresistibly suggested a poisoning by some article of food and I carefully investigated the matter from this point of view. A bacterial infection rather than a chemical poisoning was suggested by the incubation period. In the first two epidemics no special article of diet could be incriminated and I was reduced to the more general ones—milk, bread, and butter. Of these milk came the most strongly under suspicion in each case and the bacteriological evidence to which I will refer later confirmed this suspicion. The third outbreak, to which I wish to draw special attention in this paper, differed from the two preceding outbreaks in being definitely traceable to an article of diet (rice-pudding) made with milk rather than directly to the milk itself. I will shortly detail the facts supporting this statement.

The epidemic began about 10 P.M. on August 5th, 1898, and fresh cases occurred up to 6 or 8 A.M. on August 6th. All were of a mild nature; 84 patients and 2 nurses were attacked. Only 4 wards in the hospital escaped (one block was closed for alterations), but individual wards were affected in very different measure. On investigating the diets of the persons attacked I was at once struck with the overwhelming evidence against the rice-puddings which had been consumed on the previous day. The vast majority of the attacks occurred in patients on "half diet," all of whom had partaken of rice-pudding. Patients on "full diet" had been provided with suet-pudding, while those on "milk diet" had, as a rule, no pudding, and in these two classes very few attacks had occurred. Only 6 patients out of the 86, or some 7 per cent., had not eaten rice-pudding. In certain wards every patient who had eaten rice-pudding suffered, while every one who had not eaten it escaped. The two nurses who were attacked had both partaken of the patients' rice-pudding. The largest number of cases in any one ward was 14 and in this ward 20 out of 22 patients had eaten rice-pudding. Moreover, in many wards the puddings were noticed by the sisters as unpleasant to the smell or the taste, and in one ward they were on this account not served out. No diarrhœa occurred in that ward. On the other hand, in certain wards the puddings were apparently of the normal good quality and in many cases were eaten without the slightest ill-effect. There was no evidence to be obtained against any other article of diet than the rice-puddings. These facts constitute a strong presumption that the main agency in the production of the outbreak was the pudding, that it was variably toxic in different wards at the time of its consumption, and that in some 7 per cent. of the cases some accessory toxic agency was at work.

I will now pass to the bacteriological evidence, which will be found to confirm the presumption just mentioned and possibly to explain the discrepancies. I must first briefly allude to the investigations carried out by Dr. Klein in the preceding outbreaks and published in full by him in reports to the Local Government Board (1895–96 and 1897–98). In the first outbreak, which occurred in October, 1895, he found abundantly in the stools of the patients suffering from diarrhœa a peculiar spore-bearing anaerobic bacillus which he named bacillus enteritidis sporogenes. This organism differs from any previously described pathogenic species in several important respects, and it most nearly resembles the organism described by Botkin as bacillus butyricus, which, however, is non-pathogenic. The special features which distinguish Klein's bacillus are: 1. Its energetic action when grown anaerobically in milk. The milk is quickly curdled with copious evolution of gas, the spongy broken curd floating in a fairly clear, transparent whey. 2. Its intense virulence when inoculated subcutaneously in certain animals, especially guinea-pigs. Death occurs in from one to three days, with severe hæmorrhagic œdema and gangrene of the subcutaneous tissues spreading widely from the point of inoculation. The virulence varies in intensity in different cases and is lost in old cultures; recent milk cultures are the most virulent. 3. It stains well by Gram's method. This distinguishes it from the bacillus of malignant œdema; moreover, it has terminal spores of an oval shape. During the past three years a considerable amount of evidence has accumulated rendering it highly probable that this organism is concerned with the causation of epidemic diarrhœa. In all the fatal cases of "English cholera" which I have had the opportunity of examining it has been abundantly present in full virulence, and it has also been present in the majority of cases of severe and mild diarrhœas which I have investigated. It is a widely distributed saprophyte and may be found in cultivated soil, in the excrement of animals, and sometimes in that of man, though in very sparse numbers as compared with those found in diarrhœal conditions; it is very abundant in sewage. In occurs also with great frequency in milk, even in that of good quality, at least during warm weather; the conditions under which cows are commonly milked readily explain this. In many ways, indeed, the characters of the unknown poison demanded by Ballard in his well-known hypothesis as to the causation of epidemic diarrhœa are satisfactorily fulfilled by the bacillus enteritidis sporogenes. It is, however, not yet clear under what conditions it attains virulence. In the first outbreak of diarrhœa at St. Bartholomew's Hospital this bacillus was readily obtained from the milk supplied to the establishment. In the second outbreak, in March, 1898, the same organism was present in every stool of patients suffering from diarrhœa which was examined both by Dr. Klein and myself. It was also present in the milk supplied to the hospital on the day preceding the outbreak. It is worthy of note that the two first outbreaks occurred on Sunday nights; there is no second delivery of milk on Sundays and hence there is unusual opportunity for the multiplication of any living poison present, since the milk supplied early on Sunday morning has to suffice for twenty-four hours' consumption. In the third outbreak, in which the rice-pudding fell under suspicion, I obtained the stools of 3 patients suffering from diarrhœa, taken at random from three different wards, and submitted them to microscopic and bacteriological examination.

CASE 1.—A boy, aged fifteen years, who was convalescent from pneumonia and pericarditis, had eaten rice-pudding in the middle of the day on August 5th. During the following night he had mild colic and diarrhœa, passing three brown liquid stools. The attack was over by the next day. Cover-glass preparations of one of the stools, stained by Gram's method, showed amongst other organisms a fair number of large bacilli resembling the bacillus enteritidis sporogenes. Spores were present in a few of the bacilli. The bacillus enteritidis sporogenes was readily obtained on cultivation.

CASE 2.—The patient was a woman, aged forty-seven years, who was suffering from bronchitis, emphysema, and morbus cordis. She had not eaten rice-pudding on August 5th, but custard-pudding prepared at the same time and from

the same milk. Diarrhœa began at 4 A.M. on August 6th and three loose stools were passed, the last one containing blood and mucus. The attack passed off in a few hours. As in the preceding case bacilli resembling the bacillus enteritidis sporogenes were found microscopically in the stools. Only a few of them were sporing, but the organism was obtained readily enough on culture.

CASE 3.—The patient was a man, aged twenty-five years, who was convalescent from typhoid fever, and who had been previously constipated. He partook of rice-pudding at mid-day on Aug. 5th and had diarrhœa during the succeeding night, passing four brown liquid stools. The attack ceased during the next day. The specimen of stool examined was crowded with typical bacillus enteritidis sporogenes, most of which bore oval terminal spores, and there were also large numbers of free spores. The bacillus was readily obtained on cultivation.

In all three cases the cultures of bacillus enteritidis sporogenes proved highly virulent. They were made in the usual manner—that devised by Dr. Klein. Fresh sterile milk tubes were inoculated with two or three platinum loops of the stool and then heated to 80° C. for ten minutes in order to destroy everything except the spores. They were then cooled and incubated anaerobically at 37° C. in Buchner tubes. In forty-eight hours all three milk tubes showed energetic coagulation and gas-formation—a ragged clot floating in clear whey. Microscopically they appeared to be pure cultures of the bacillus enteritidis sporogenes. Guinea-pigs were inoculated subcutaneously in the groin with 1 c.c. of the whey from each milk tube. One died in less than twenty-one hours and the other two in less than forty-eight hours. All showed similar appearances—an intense hæmorrhagic œdema and gangrene spreading over the abdomen and the thorax. The bloody fluid teemed with the bacilli which also were found in the heart-blood and spleen in smaller numbers.

I was unfortunately not able to obtain a specimen of the milk which had been supplied to the hospital on August 5th as all had been used or thrown away. (I have no doubt, however, that I should have found the bacillus enteritidis sporogenes in it. A week or two later on six consecutive days I tested the milk supplied and found the organism present on five days out of the six.) In one ward, however, a sample of the rice-pudding eaten on August 5th had been preserved for me. In this ward there had been several cases of diarrhœa which seemed clearly attributable to the pudding. The pudding, then twenty-four hours old, was sour to the smell and acid to litmus. Cover-glass films prepared from it stained by Gram's method and in other ways showed amongst other organisms a large number of large bacilli precisely resembling the bacillus enteritidis sporogenes in size and shape, but in none could any spores be detected. The other organisms present were cocci and small bacilli resembling the lactic acid bacillus. I did not further investigate the nature of these. A number of cultures were made from the pudding, some aerobic and some anaerobic, some after heating to 80° C. for ten minutes and some unheated. The heated cultures all failed, as I anticipated, since no spores were present. The unheated ones were necessarily impure, but all showed evidence of the presence of the bacillus enteritidis sporogenes. An unheated milk culture, incubated anaerobically, behaved quite like a culture of that organism, showing in forty-eight hours a dense coagulum honeycombed with gas bubbles and a clear whey in which were present both enteritidis-like bacilli and small bacilli like the bacillus acidi lactici. Some of the unheated rice-pudding, incubated anaerobically at 37° C., showed precisely similar changes and the whey teemed with enteritidis-like bacilli. A large guinea-pig was inoculated subcutaneously with 1½ c.c. of the whey from this milk culture which contained both the bacillus enteritidis sporogenes and other bacilli. In twenty-four hours it was very ill, with much local swelling over the belly wall, and in forty-eight hours it was worse, and in the region of the inoculation the abdominal wall was thickened and contracted. On the third day I extracted a drop of fluid from the swelling with a sterilised hypodermic syringe. This fluid showed fat droplets and fragments of necrotic tissue and a moderate number of degenerate-looking bacillus enteritidis sporogenes. An anaerobic milk culture was made from it and grew in the characteristic manner. With the whey from this culture which contained other organisms besides the bacillus enteritidis sporogenes a second guinea-pig was inoculated. Meanwhile on the fourth day the first guinea-pig died and showed changes resembling those produced by the bacillus enteritidis sporogenes, but with absence of any marked accumulation of fluid. This is often the case when death does not occur within the first two or three days. The bacilli present were granular and degenerate; they were not very numerous either locally or in the spleen. The second guinea-pig showed in two days a considerable effusion of fluid into the subcutaneous tissue over the abdomen and the thorax. It was killed on the third day and all the changes characteristic of infection by bacillus enteritidis sporogenes were found. It may therefore be taken as reasonably certain that the bacilli which were microscopically demonstrable in the rice-pudding were truly bacillus enteritidis sporogenes, although their virulence was less intense than in the case of the bacilli obtained from the stools of the patients affected by the diarrhœa.

It may be urged that the process of cooking would destroy any germs in the pudding derived from the milk with which it was made. To test this point I visited the hospital kitchen with a thermometer and ascertained the temperatures attained at different stages in the cooking. The mass was first "boiled" in a large copper, and I found its temperature about 70° C. in the upper layers and from 80° to 85° C in the deeper parts. The pudding was then baked in small dishes in an oven. I tested one removed hot and bubbling from the oven and found its temperature to average from 90° to 92° C., and nowhere to exceed 98° C. Now, the spores of the bacillus enteritidis sporogenes, like those of Botkin's bacillus butyricus, are amongst the most resistant known and will stand 100° C. for a considerable period, and I therefore find no difficulty in believing that such spores, originally present in the milk, may have escaped in certain parts of some of the puddings—an assumption which might explain their variably toxic character.

I consider that these epidemics and the above facts in connexion with them are worth placing on record for more reasons than one. I imagine that similar outbreaks are not uncommon in large institutions though they are not often recorded. The occurrence of three precisely similar epidemics in three years at St. Bartholomew's Hospital is a striking circumstance. Bacterial infection through the channel of hot baked rice-pudding is not quite what might have been looked for, yet I think the evidence points in that direction in the case of the last of the three epidemics. It is, however, as a contribution to the study of epidemic diarrhœa and its causation that the facts are best worth recording. There may be those who will disagree with the interpretation which I have placed upon the facts, and, indeed, there are several points which are by no means clear. Why, for instance, should the rice-pudding made with milk have been capable of setting up diarrhœa while the milk from which it was made caused no such symptoms? It may be that the process of cooking, by destroying all competing microbes, gave a freer hand to the bacillus enteritidis sporogenes. Yet it can hardly have had time for the exercise of such unrestricted activity, since the puddings were for the most part consumed hot from the oven. It may be, again, that its toxic powers were in some way enhanced by the process of cooking. We know little or nothing of the conditions under which the organism attains virulence. It is a common saprophyte and it is probably habitually consumed in milk with no deleterious effect, yet under certain circumstances it becomes highly pathogenic. If it be true, as it would appear, that an organism so virulent to guinea-pigs is almost constantly to be found in association with acute diarrhœa and is not found, or is only exceptionally found, under conditions in which the intestine is normal, it is difficult to avoid the conclusion that this organism has a direct connexion with diarrhœa—presumably a causal connexion. Yet it is so common and so widely distributed a saprophyte that it seems clear that its mere presence in the intestine cannot alone be the effective cause of diarrhœa. There must be certain conditions under which its virulence becomes highly exalted, and the nature of these conditions is a very promising field for future research. Meanwhile, I must be content to have shown, as I believe, that in a given extensive outbreak of mild diarrhœa the bacillus enteritidis sporogenes of Klein was present in virulent form in the stools which were examined, that the channel of infection was in all probability rice-pudding, and that the rice-pudding contained the bacillus in question.

Highgate, N.

HERNIOTOMY PLUS LAPAROTOMY SUCCESSFULLY PERFORMED UNDER VERY UNUSUAL AND DIFFICULT CIRCUMSTANCES.

BY E. MATTHEWS OWENS, M.D., L.R.C.P. EDIN., M.R.C.S. ENG.

IT is to be sincerely hoped that it will but seldom occur to a surgeon to be placed in the position in which I was on Sept. 8th, 1898, when on board the s.s. *Nineveh*, belonging to the Aberdeen White Star Line, while off the Cape.

The patient, a steerage passenger, thirty-eight years of age, when lifting a box in a strong gale of wind at 4 P.M. strangulated an old inguinal and scrotal hernia. I tried gentle taxis, ice, opium, and other usual remedies, but all to no purpose. I felt assured that an operation would be required and therefore I was very careful about taxis, not using more pressure than was absolutely necessary. At 8 P.M. I decided to operate, knowing full well that every hour would lessen the chance of success and the man was rapidly losing strength, vomiting being incessant and the pain excruciating. The rôle of anæsthetist I had to entrust to the purser (Mr. Freeman). In reply to my inquiries he said that he had seen chloroform given once and that he was "not afraid"; so I rejoined, "You will do." There was on board the usual amputation case which was of no use in this operation and there was also a pocket dressing-case. The latter had to supply all the instruments; it contained, luckily, a finger amputation knife. In the amputation case was a Wells's forceps of primitive pattern. The silk used was of the usual braided kind wound on a card and not too clean. I raked up six needles such as are to be found in pocket-cases and are used for sewing up superficial cuts. There were no sponges, but about ¼ lb. of alembroth wool as well as plenty of lint. Fortunately there was a bottle of iodoform gauze. For antiseptics I had to depend upon a bottle of solution of perchloride of mercury (B.P.) and boric acid, the latter being not too plentiful. Empty beer-cases and a mattress were made to serve as a couch, and the operating theatre was the surgeon's cabin, the available space of which was 6 ft. by 5 ft. 6 in. The patient's feet were against the door and his head was against the bunk. I thought of the theatre of St. Mary's Hospital where I had spent so many happy and profitable hours during the previous twelve months watching my old friends Owen, Page, and Pepper doing such brilliant things. If they could only have seen *my* theatre and instruments and assistants! For assistants I had to have two deck hands, whose sole duty was to keep the patient from rolling off his by no means safe couch, and in spite of every care we were hurled from side to side by the rolling, and more than once assistants, patient, anæsthetist, and operator were generally mixed up when an extra big sea hit the ship. The patient having been brought under the influence of the chloroform I again tried taxis with no benefit. After shaving the pubes and disinfecting the skin as well as I could I cut down over the sac which I rapidly opened and I divided the stricture (in the pocket-case there was a hernia knife). A "mixing up" such as I have referred to above then took place and when we had got back into our respective places I found that from 12 in. to 15 in. of intestines had come out of the scrotum (it was a big hernia). Then another interruption, a mere matter of detail, occurred—viz., artificial respiration had to be performed, the anæsthetist having been too liberal with his chloroform. That being successful I was again at liberty to resume my operation, but having no sponges and no assistants to look after the exposed bowel it had to take its chance whilst I was at the other work. That "chance" was not very bright, I thought, for the bowel was not too warm. I now tried to return the gut into the abdominal cavity, but do what I would I could not coax it back. There were no adhesions at the stricture, but the cause of my not being able to get it back was the presence of so much flatus. I was at my wit's end with not a soul to consult and with no friendly colleague to offer a suggestion. I decided to perform laparotomy and to draw the bowel from the inside. I made my incision 4 in. in length in the middle line. There was a large amount of venous bleeding from the engorged abdominal vessels which I could only control with hot water. When this had been stopped I opened the peritoneum and passed my hand within the abdomen and by gentle manipulation from without and within I was able to pass the flatus on and thus get the bowel back into the abdominal cavity. The sewing up of the abdominal wound presented some difficulty, the needles being so short and the abdominal walls thick, and as there was no needle-holder the handle of the shut-up finger-knife had to be used to push the needle on, Wells's forceps doing the rest.

I thought that if the poor fellow lived I should like his hernia to be radically cured, but how on earth was I to get the pillars of the ring together? For I most certainly did not care to bury sutures with such silk as I was using, so I determined to gather the edges of the pillars like a purse, using one piece of thick silk armed with two of my little needles. After gathering it up I brought both needles out through the skin half an inch apart and an inch or so from the wound and tied the suture tightly. The result was most satisfactory for the parts became thoroughly consolidated.

The after-treatment consisted chiefly of the patient being rolled from side to side by the motion of the vessel for four days for it blew hard all that time, but in spite of everything against him his temperature never reached 99° F. and on Sept. 28th he walked off the steamer at Melbourne quite well. I heard from him from Tasmania on Oct. 24th that "he never was in better health, that the wounds were only faint red lines, and that he felt nothing whatever of his rupture."

Now, there is no use in publishing cases unless there is some lesson to be learnt, and what does this case teach? Firstly, to remember that in the majority of cases of strangulated hernia taxis will not be successful; therefore taxis should be used as little as possible and as gently as possible, for if operation is dispensed with for the time being it will have to be resorted to at some future time and the operator then will not be inclined to bless the practitioner who has made the patient run greater risk for the useless and perhaps rough manipulation which the bowel has received at his hands. Secondly, operation should be performed early. This man owed his life to the fact that I used but gentle taxis and that I operated within four hours of the strangulation, so that he was not allowed to get exhausted by vomiting and pain, when knowing full well that I should have to relieve him sooner or later by operative measures. Thirdly, never despair of, or "funk," an operation however black things look against its chances of success.

Bendigo, Victoria, Australia.

A CASE OF CONGENITAL ABSENCE OF BOTH CLAVICLES.

BY GUSTAVE SCHORSTEIN, M.B. OXON., F.R.C.P. LOND., D.P.H.,

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A GIRL, aged thirteen years, was brought to see me at the London Hospital with a history of losing weight and of sickness in the morning. Her picture appears at Fig. 1 of the accompanying plate. She was rather small and dark-skinned. The father and mother are both healthy and there are three brothers who are also healthy. There is no evidence of tuberculosis or of syphilis in the family. The child has always been weakly. She was "rickety" as an infant and could not walk till she was four years old. She has had measles and had at the age of nine years a long illness with fever and diarrhœa which may have been enteric fever. The patient is small in height and size, the height being 4 ft. 2 in. She is very dark in colour. The head is out of proportion to the body but not overlarge for her years. The frontal and parietal eminences are prominent and the depression between the frontal eminences is well marked. The fontanelles have closed. There is a large depression corresponding to the anterior fontanelle and a smaller one corresponding to the posterior fontanelle. The mother stated that the anterior fontanelle did not quite close till the child was nine years old and for that reason she was anxious when sending her to school. The conjunctivæ are very pale and there is slight general anæmia. There is some enlargement of the glands in front of the left sterno-mastoid.

On examining the front of the chest there is no very obvious

Reproduction of Röntgen photograph of Dr. Schorstein's case of absence of the clavicles. The rudimentary clavicle is seen on the right side.

FIG. 2.—Reproduction of Roentgen photograph of Dr. Schorstein's case of absence of the clavicles. The rudimentary clavicle is seen on the right side.

Fig. 1.

Fig. 2.

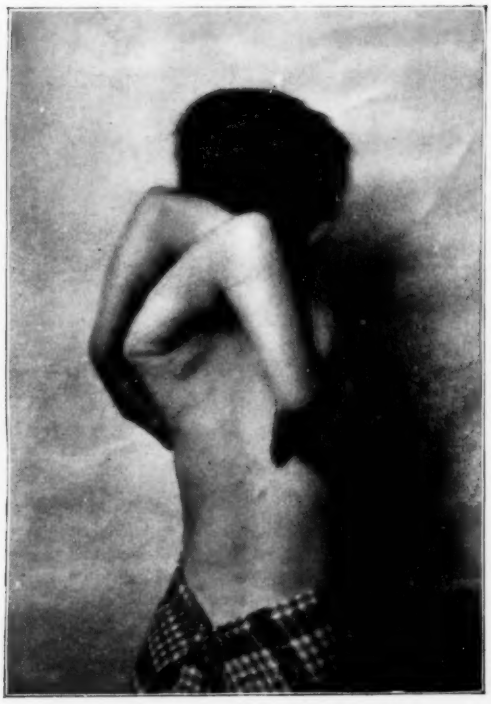


Fig. 3.

Fig. 4.

TO ILLUSTRATE PAPERS BY DR. G. CARPENTER AND DR. SCHORSTEIN.

abnormality when the child stands still. The shoulders droop slightly and fall forwards a little and there is a continuous surface on either side in front and above, in place of distinct supra- and infra-clavicular fossæ. The thorax itself is fairly well shaped, with a little depression of the sternum backwards. On drawing the finger along the site of the clavicle on either side it is found that the outer two-thirds of both clavicles are absent. On the right side this is not absolutely true, as there is a small spicule of bone about ⅔ in. in length articulating with the right acromion. (This is shown in the skiagram.) The inner thirds of both clavicles are present; they articulate apparently by a good joint with the sternum and end externally in a fairly sharp point immediately under the skin. This piece seems to be fibrous or cartilaginous and not bony, and does not show in the skiagram. To it on each side is attached the clavicular portion of the sterno-cleido-mastoid muscle, both of which are perfectly developed. On turning the head to the opposite side, and pulling on the clavicular head of the sterno-cleido-mastoid, the external end of the clavicle present is made prominent. The first rib and the attachment of the scalenus anticus muscle can be easily mapped out and the subclavian artery compressed on the upper surface of the first rib. There is no cervical rib. On examining the back, the scapulæ are in the alar position. The scapulæ are small and at first give the impression that there is no supraspinous fossa; but there is on either side a small supraspinous fossa and a supraspinatus muscle.

The arms and legs are small but are fairly shaped and not bent. All the joints are good. The teeth are much decayed, the enamel of the free edges of the upper central incisors is irregular, but in shape and appearance the teeth do not suggest syphilis. There is no grave abnormality of the heart or lungs. The liver and spleen are normal in size. The urine is normal. There are no changes in the media of the eyes or in the retina or choroid. Except for some anæmia the child was perfectly well during her stay in hospital.

The two points of interest in the case are: (1) the singularly little amount of inconvenience produced by the absence of the clavicles and (2) the pathology of the condition. The amount of inconvenience was so small that neither the patient nor her mother was aware of anything odd until it was pointed out to them. On examination it was found that there was practically no ordinary movement which the child could not carry out well. She can lift a heavy weight right above her head with ease. She can give a fairly heavy blow from the shoulder and can lift her body when suspended by the arms. The additional freedom of movement enables the two acromion processes to be brought into contact anteriorly in the middle line, as shown in the photograph (Fig. 1 in inset), and allows her to twist her arms behind her back much more readily than usual.

The condition is a rare one. A precisely similar case (with engraving) is recorded in the *Archiv für Heilkunde*[1] by O. Kappeler, who gives references to four somewhat similar cases recorded by C. Gegenbauer. Most interesting from the pathological standpoint is a record of the only two post-mortem examinations of similar cases which I can find which is given by Professor Scheuthauer[2] of Budapest. In all the accounts absence of clavicles and particular conformation of the head seem to go together. Professor Scheuthauer's records are both of adults. He describes the large frontal and parietal eminences with deep grooves between. The anterior and posterior fontanelles were not fully closed in either of his cases. The bones of the vault of the skull were thin and porous. He found on dissection that all the muscles in the neighbourhood of the clavicle were properly developed in spite of the absence of the bone and this certainly appears to me to be the case in my patient. "The clavicular portions of the right and left deltoid and trapezius muscles are inserted into an oblique band of fibrous tissue which starts near the upper end of the sternum, runs across in front of the glenoid fossa of the scapula, and terminates in an angular piece of bone 1 in. long, slightly convex, close to the upper part of the fossa. To the upper portions of this band the clavicular portion of the sterno-cleido-mastoid muscle is attached; to the lower the pectoralis major. From its lower surface springs a very large subclavius muscle. The costo-coracoid membrane fuses with it." In one of the cases there were sternal rudiments of the clavicle, as in my patient. He notes the smallness of the nasal bones and of the temporal portion of the temporal bones.

It is at once obvious that the bones which are undeveloped are all bones (clavicles, frontal, parietal, occipital, nasal) which develop in membrane. The two possible underlying factors are fœtal syphilis and fœtal rickets. Of syphilis in my patient I can find no history whatever and absolutely nothing confirmatory in the eyes, teeth, or viscera. Still it may later prove that it is an expression of syphilis. The abnormality in the clavicle and the skull appears to me to be the result of rickets showing itself before the end of the second month of fœtal life. The story of the very late age (four years) at which the child learnt to walk and the late closure of the anterior fontanelle (nine years) fit in with this hypothesis.

I am indebted for the photographs to Mr. Ernest Harnack of the London Hospital.

Portland-place, W.

[1] 1875, vol. xvi., p. 285.

[2] Allgemeine Wiener Medizinische Zeitung, Sept. 12th and 19th, 1871.

A CASE OF ABSENCE OF THE CLAVICLES,

WITH AN ACCOUNT OF VARIOUS DEFORMITIES OF THE CLAVICLES IN FIVE OTHER MEMBERS OF THE SAME FAMILY.

BY GEORGE CARPENTER, M.D., M.R.C.P. LOND.,

SENIOR PHYSICIAN TO OUT-PATIENTS AT THE EVELINA HOSPITAL FOR SICK CHILDREN.

A GIRL, aged eight years, was brought to the Evelina Hospital for Sick Children on Nov. 22nd, 1897, suffering from impetigo contagiosa with secondary glandular implication. While making a physical examination a deficiency of clavicles was discovered. Her mother then volunteered the information that a brother had a similar deformity on one side. The child's father also had a deformity of the clavicle and a depression of the lower part of the sternum and two sisters older than herself had club feet. Another child, an out-patient, was found to have a depression in the middle of the sternum. Examination revealed the following abnormalities. The clavicles were represented by two small fragments, thin, tapering, and cartilaginous (the Roentgen photograph suggests bony as well), attached by their broader extremities to the sternum. The left was longer than the right, their respective lengths being 1¼ in. and ¾ in. On the index finger being pressed behind the outer extremity of either fragment the fragments could be dislocated so that their direction was nearly straight forwards. In this position a depression of the lower part of the sternum was evident and the sternum was seen to be unusually wide at its upper part. As the child stood upright the shoulders were obviously narrowed; they fell downwards and forwards, the scapular angles projected backwards to a marked extent, and under the acromion was seen a depression as in a sub-glenoid dislocation. What appeared to be the first rib could be felt with great distinctness on either side, as also the coracoid processes. Between each coracoid process and acromion was a well-developed coraco-acromial ligament, and so apparent were these ligaments that they raised the suspicion of acromial clavicular fragments. The sterno-mastoid muscles apparently had some attachments to the fragmentary sternal clavicles. The clavicular portions of the great pectoral muscles were wanting, but the pectoral portions stood out well when placed in action. The anterior portions of the deltoid muscles were also wanting, as also were the clavicular fibres of the trapezius muscles. The child was thin and her muscles were not well developed, but she was not by any means wanting in power. She could carry the youngest child, a well-developed infant a year old, could push and throw well, and could bear the weight of her body when hanging by her hands. She could approximate her shoulders to an extraordinary extent with the greatest ease. Another position (Fig. 2) was assumed and retained with the greatest ease. Here the arms were crossed behind the head, the elbows pointed upwards, and, as may be seen, were several inches apart. The scapular borders could be made to touch behind and even to overlap. By

muscular action the shoulders could be made to touch the ears. She could also approximate her arms in front of her body quite as readily, the elbows being placed anteriorly. This is seen in Fig. 3. It was found necessary in this instance to tie her arms together for photographic purposes, as without assistance the forearms and hands became blurred from want of steadiness in this position. When her arms were extended above her head (see Fig. 4) the tops of the shoulders looked downwards and the scapular angles projected posteriorly at a much higher level. The elbows and the ulnar borders of the arms looked forwards. The neck was bent and the head projected forwards. I am indebted for the photographs to Miss Sutherland, M.D., who has taken great pains in this respect. The Roentgen ray photograph (see Fig. 5) has been taken by Dr. David Walsh, who also very kindly supplied the following description of it:—

"The Roentgen photograph of this case was taken with the patient lying on her back, and the focus tube at a distance of 12 in. from the sensitive plate; exposure 2½ minutes. Several abnormalities appear in the photographic record. The first point which strikes one is the apparent absence of clavicles, but on closer inspection the shadow of two fragments can be seen lying in the position of the sternal ends of the collar-bones, that on the left side being longer. These shadows are so faint that it is unlikely that they can be reproduced on a process block; their faintness is due to the fact that they are near the focus tube. No trace of the outer part of the clavicle can be seen on the right side, but on the left there is a faint shadow on the photograph which from its size and position suggests a cartilaginous rudimentary clavicle with a more or less ossified inner end. The transverse process of the last cervical vertebra is so enlarged as to suggest an approach to a cervical rib."

The patient also possessed another developmental peculiarity—viz., of the hands. The heads of the proximal phalangeal bones were enlarged on the palmar aspect and there was thickening of the skin and subcutaneous tissues in these situations. The joints could be easily over-extended.

The following is a brief account of some striking deformities of the clavicle in other members of the family.

The father of the child had no knowledge of any of his relatives being similarly affected; his father certainly was not, "though his mother might have been as she was rather a weakly woman." He likewise had deformed clavicles, though he was not aware of the fact until it was pointed out to him. He was a boot-finisher—a man of slight build, with obviously narrow shoulders. His clavicles, right and left, were divided into two parts. On the right side the acromial fragment was nearly a finger's breadth lower than the sternal, its tip was internal to it, and it was overridden for half an inch or more by the sternal end. Both ends were rounded and the inner was thickened. On the left side much the same deformity was noticed except that the inner end of the outer fragment was not displaced downwards more than about half an inch or so. The ends of the bones were slightly moveable—the outer fragments less so than the inner. The length of the inner fragments was nearly 3 in. When muscular action was brought into play he failed to approximate the shoulders in front by 2½ in.

The brother of the patient first mentioned, aged fourteen years, presented no deformity on the left side except that there was a prominent arching forwards of the clavicle. On the right side the clavicle was divided into two fragments. The sternal portion was 2¼ in. in length, fairly movable upwards and downwards, but could not be brought forwards. The outer part was 1¼ in. in length, seated at a lower level and more internal, being overridden by the sternal fragment. Both ends were rounded and there was as far as could be determined ligamentous union. The transverse process of the last cervical vertebra appeared prominent on the right side and possibly also on the left side. As he stood the right shoulder was seen to be at a lower level than its fellow and both scapulæ were prominent, though there was very little difference between them, but what difference there was was in favour of the affected side.

In another brother, aged nineteen years, both clavicles showed a very peculiar kink in the position where the fragments in the other cases were separated. The clavicles stood out prominently at this spot. There was no solution of continuity. He presented a sternal depression sufficiently large to admit half of an ordinary-sized orange. The xiphoid projected a little forwards, the end of the gladiolus backwards, and had a shallow depression in it, but the depression—or the hole rather—was really made by the heaping up of the ribs in the neighbourhood. I do not think that this can be considered as necessarily congenital as I have seen much the same kind of deformity manufactured during rickets and fixed in position by the later consolidation of the bones.

A sister, aged twelve years, was also deformed. The left clavicle was natural, but on the right side there was solution of continuity. The sternal fragment was a little over 2 in. in length and the acromial 1¼ in. or more. Both ends were rounded and the sternal fragment overlapped the acromial, which was placed much the same as in the other cases. The sternal end was freely moveable up and down and to a much less extent forwards. On the right side the last cervical vertebra presented an enlarged transverse process or possibly a cervical rib. She was the patient who was stated to have suffered in infancy from club feet, but this was not in evidence at the present time, though she had flat feet. Doubtless there was some truth in the statement as a plaster cast was taken of the foot.

Another brother whose age was sixteen years had normal clavicles, but the transverse processes of the last cervical vertebra seemed prominent.

In a sister, aged five years, there was no clavicular deformity.

A brother, aged seven years, had a deformed right clavicle. This clavicle was divided as in the others, but to a much less extent. The outer fragment was 1½ in. in length and the inner was 1⅜ in. The bone at first sight appeared to be unaffected, but more careful examination revealed an indentation and this indentation was found to be owing to a very close approximation of the fragments. Mobility was slight though apparent in all directions. The fragments were either united by a ligamentous band or there was a false joint there. The sterno-clavicular joint was very loose and this end could be moved in a very marked manner in various directions. The left clavicle showed a depression in the corresponding part, but there was no solution of continuity. The transverse processes of the last cervical vertebra appeared to be prominent.

Judging from the published literature on this subject congenital deficiencies of the clavicles are extremely rare. Whilst the clavicles are rarely absent in man and animals using the upper extremities for prehensile purposes they are not to be found in certain other non-prehensile mammalia. The herbivora and carnivora have no collar-bones, or they are merely represented in a rudimentary way, for their shoulders are not required to be kept apart. On the other hand, in birds they are well developed—the more powerful the wings the more are they in evidence. In Dr. O. Kappeler's[1] case, a female who was small for her age—she was sixteen years of age and possessed of but moderate intelligence—the condition was very similar to the above case. Sternal fragments of the clavicles were present. On the right side was a loosely jointed fragment of bone 1½ cm. in length and with pointed end. On the left a loosely jointed piece of bone was present, ending in a point, and 4 cm. in length. On the left the sterno-mastoid muscle was attached to the fragment but not on the right. The great pectoral muscle was feebly developed. Kappeler gives two woodcuts in illustration of the position his patient was able to assume. The father of the child had pes varus, as had also four of his children, this patient included, the offspring of two marriages. Kappeler also gives the following references. In Jenner's cases, of which there were four, the sternal parts (from 5 cm. to 7 cm. in length) were present in three, and in the fourth there were acromial parts connected with the sternal by ligamentous bands. He also gives a quotation from Fleischmann of Martin's case, in which the acromion made up for the missing portion, and he mentions a case under Gegenbauer's care where there was congenital absence of the acromial end. Recently Todd[2] reported that he had found in the dissecting-room a subject without clavicles. Rudiments of the clavicles were attached to the acromion process and to the sternum, the intermediate portions being wanting.

[1] Archiv der Heilkunde, vol. xvi., 1875, p. 265.

[2] From St. Louis Courier of Medicine, April, 1898. Report of meeting of Medico-Chirurgical Society of St. Louis, Feb. 7th, 1898.

Fig. 5.—Reproduction of a Roentgen photograph to illustrate Dr. Carpenter's case of absence of the clavicles. For description see text.

FIG. 5.—Reproduction of a Rœntgen photograph to illustrate Dr. Carpenter's case of absence of the clavicles. For description see text.

The following case was shown by Dr. Dowse at the Pathological Society in 1875.[2]

"The patient was a female, aged fifteen years, the eldest of eight children, of whom six were living. The mother was stout and fair complexioned. She was not subject to fits, neither were any of the family. The mother when pregnant had to live in the country, to which she was unaccustomed. She was extremely nervous and had a great dread of frogs which abounded. The child was born at full time, the head was unusually flat, and it used to be said that when touched she would extend her arms and legs and open her eyes like a frog. She grew up intelligent, but at nine years of age began to have epileptic fits. Three years later she lost the use of her lower limbs for a time and there was a gyratory movement of the left arm over which she had no control. Upon examination chest development appeared to be normal, but the range of shoulder movement was much greater than natural. On examining the clavicles only the sternal ends could be clearly made out and it was concluded that the acromial ends had never developed, from which it would be imagined that movement would be impeded. On the contrary, movements could be effected which were impossible with natural clavicles. There was more development on the left side but no false joint existed."

The points of interest in Dr. Dowse's case are as follow: 1. Are the bones congenitally ill developed? 2. Were they at one time of normal development and fractured in utero at the latter period of gestation, or at the time of birth, or subsequently? 3. Is it possible that the mother's nervous state and great fear of frogs could have made an impression upon the fœtus in utero, which impression led to the arrest of development? In my own mind I feel quite sure that the clavicles—that is, their acromial ends—were never developed, and this sets aside the question of fracture.

Welbeck-street, W.

THE INFLUENCE OF THE SHAPE OF THE THORAX UPON FRACTURES OF THE RIBS.

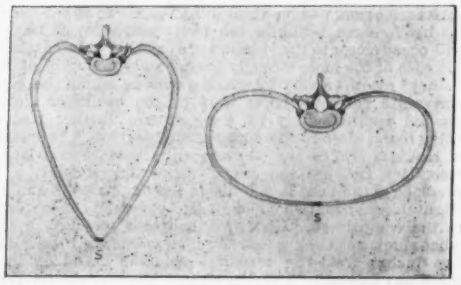
BY EDRED M. CORNER, B.SC. LOND., M.A., M.B., B.C. CANTAB.

IN THE LANCET of Oct. 1st, 1898, I dwelt upon "The Influence of Position in Fractures and Dislocations as shown by a Comparison of these Injuries in Man and Animals." In that communication I confined my attention almost entirely to the limbs, whilst now I wish to draw attention to the influence of the shape of the thorax upon fractures of the ribs. I know of no article dealing with the effects of the pigeon-, barrel-, funnel-, &c., chest of man on these injuries. The pigeon-chest is related somewhat to the type of thorax of the quadruped while the barrel-shaped chest is an exaggeration of the thorax of the typical biped. The remarks which I may make in comparing the influence of these two great types of mammalian thorax will therefore apply in some degree to these pathological varieties of the human chest. The influence of a pathological factor, such as rickets, must however be borne in mind.

Amongst mammals two main types of the shape of the thorax exist (Fig. 1). These have been called "primary" and "secondary" respectively. That the primary condition is properly so-called is shown by a study of the development of both individuals and classes—i.e., ontogeny and phylogeny. The primitive thorax is found in nearly all mammals except in the anthropoid apes and man. Its characteristic points are that it is elongated from before backwards and that the dorso-ventral diameter exceeds the transverse. The result is that the general shape is keeled or carinate, the sternum being laterally compressed and prominent. A greater number of ribs are usually present than in man, probably in correlation with the elongation of the thorax antero-posteriorly. The anterior ribs are curved but little, emphasising the greater length of the dorso-ventral diameter over the transverse diameter of the chest in this region. As we proceed backwards the ribs become more curved and the lengths of the two diameters approximate somewhat.

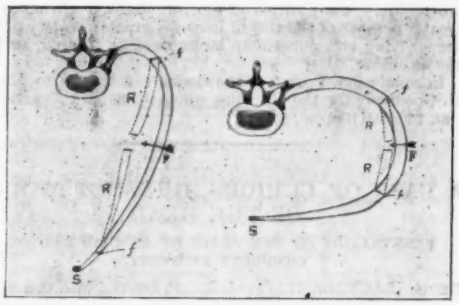
The secondary class of thorax is found in the anthropoid apes and in man. Compared with the primary shape of the chest the secondary type is shortened antero-posteriorly (in man from above downwards) and the transverse diameter exceeds the dorso-ventral diameter (antero-posterior in the erect attitude). The change from one type to the other has been generally asserted to be due to the assumption of the erect position shifting the centre of gravity towards the vertebral column and the development of the muscles of the upper limb when it takes on "seizing" functions (Ruge). The ribs of ungulates are generally more or less flattened, especially in the ox and camel, but less so in the odd-toed ungulates (the perissodactyla). Each rib is divided into sternal and vertebral segments which articulate by means of a kind of ball-and-socket joint. In contrast with these points the ribs of man are much more strongly curved and less strongly made, for which reason their elasticity is far greater (Fig. 2).

FIG. 1.



Diagrams of transverse section of thorax (1) of quadruped and (2) of man. S, Sternum.

FIG. 2.



Diagrams of thorax.—(1) of quadruped, (2) of man. F, Line of action of force with primary fracture. R, Inward displacement of ribs giving rise to secondary fractures at *f*, nearer sternum, S, and vertebral column. The secondary fractures may arise with simple bending of the ribs with the primary fracture as shown.

Having given a very brief description of the shapes of the chest and of the ribs the effects of violence on them will be considered. 1. With respect to indirect violence, exclusive of muscular action, a four-footed animal is by its very nature practically exempt from a dorso-ventral squeeze. Therefore, so far as regards the points which are considered below, a quadruped's ribs are practically safe from indirect violence. In the case of such an accident the ribs of a quadruped, being straighter than those of man, would transmit the force more directly to the vertebral column and so be less likely to be broken than the more curved ribs of man. I could find no account in the veterinary literature of such an accident, whilst in man, owing to the erect position, such accidents are a fairly common cause of fractured ribs. A fracture of the

[2] Congenital Deformity of Clavicles, by T. S. Dowse, M.D., Transactions of the Pathological Society of London, vol. xxvi., 1875, p. 166.

anterior ribs by muscular violence in the horse has been recorded by Hockfleth,[1] and Gabriel[2] has recorded another case which is, however, of possibly doubtful character. Speaking generally it is to be expected that direct violence will be less likely to fracture the stronger and less curved ribs of a quadruped than the more curved and relatively weaker ribs of man. The greater elasticity of the latter may assist them in some degree. The force will first drive inwards the rib or ribs at the point struck. This may lead to fracture at this point or, if the force is insufficient for this, to temporary bending of the ribs, especially in man. In either case the force, being great enough, may lead indirectly to the ribs being broken nearer the sternum or vertebral column—i.e., their fixed ends. In the horse this further fracture, owing to the lesser curvature of the ribs, will occur closer to the sternum or vertebral column than in the case of the more strongly curved and elastic ribs of man. Ashley[3] records a very interesting case in which the eighth and ninth ribs of a horse were broken by direct violence applied approximately to their centre, further fractures being found close to the vertebra and sternum. The number of ribs attached to the sternum will therefore influence the secondary fractures occurring near the sternum. The presence of the joint in the ribs of the ungulates will in some slight degree counteract the greater elasticity of man's ribs in the comparison. Goodwin[4] has also recorded a somewhat similar case in which secondary fractures were found two inches from the vertebral column. And again the force was transmitted by the strong, slightly curved ribs to the vertebræ, resulting in a fracture of one of these. The further or secondary fractures are examples of fracture by indirect violence and may occur with a primary fracture at the point of application of the force or with simple bending in of the ribs there, the elasticity of the rib in man and to some degree the joint in the ribs of the horse allowing sufficient deformation to occur. The ribs of a quadruped may therefore be broken by both direct and indirect violence. In the case of man, probably by far the greater number of ribs fractured by blows are broken by indirect violence, the ribs being only driven in at the place struck, the fracture occurring a little way off. This is perhaps not sufficiently appreciated and explains the comparative absence of injuries to the deeper lying structures such as would be expected frequently to occur from direct violence. In man the presence of a clavicle protects the first two ribs; in horses though this bone is absent the anterior ribs are naturally protected by the position of the fore-limbs. Owing to the greater number of the ribs of horses a greater variety of the deeper lying structures may be exposed or injured, such as the omentum.

In conclusion, I must acknowledge my thanks to Mr. C. M. Goodbody for the diagrams which illustrate this article.

St. Thomas's Hospital, S.E.

[1] Möller's Veterinary Surgery, p. 184.
[2] Veterinarian, vol. xxiii., p. 666.
[3] Journal of Comparative Pathology, vol. xi. 2, p. 175. Veterinarian, vol. lii., p. 681.

A CASE OF CURIOUS GUNSHOT WOUND OF THE HEAD;

PENETRATION OF THE BRAIN BY AN IRON RAMROD; COMPLETE RECOVERY.

BY G. LACY BARRITT, L.R.C.P. LOND., M.R.C.S. ENG.,
SURGEON TO THE JOHNSTON HOSPITAL, SPALDING.

A BOY, aged fifteen years, was admitted to the Johnston Hospital, Spalding, on July 20th, 1898. This boy was employed scaring crows and was provided with a muzzle-loading gun with a roughly made iron ramrod 30½ in. long and ⅝ in. in diameter at the bulbous end and weighing 10¾ oz. On the above date he was missing at lunch time and his brother went to look for him; he found him lying on the ground rubbing his head, with blood on his shirt and coat. On being spoken to he got up and though he appeared to be quite dazed he walked 200 yards to the farmyard carrying his gun. He was bleeding from his forehead and could not be made to speak and it was noticed that he could not use his right hand properly. His head was bandaged by one of the labourers who had attended ambulance classes and he was driven to the hospital, a distance of three miles. On his arrival he got out of the trap and walked into the hospital.

The patient was seen by me shortly after his admission. He was lying in bed in a semi-comatose condition; on examination he was found to have a punctured wound of about the size of a sixpence in the forehead ¾ in. above the centre of the left eyebrow and another slightly larger wound of a similar character over the centre of the left parietal eminence (Fig. 1). On closely examining these wounds

FIG. 1.

Reproduction of photograph showing the wounds in the head.

they were both found to lead directly down to the skull cap, which was fractured in both places, the fractures being clean punched-out holes in the skull, the one over the forehead just admitting the tip of the little finger and the other one being slightly larger and more ragged at the edges. There was no splintering of the bone, the punctures in the skull being as clean almost as if they had been made with a drill. In order to thoroughly ascertain what injury had been done a fine probe was passed gently into each wound and was found to penetrate quite easily right into the interior of the skull for 2 in. No attempt was made to pass the probe farther for fear of increasing the mischief, though there is little doubt that the probe might have been passed right through from one wound to the other. The diagnosis was arrived at that some foreign body had penetrated completely through the skull and from the position of the two wounds must have wounded the brain.

On further inquiry and from the subsequent statement of the lad when he recovered it appears that he was loading his gun with the hammer cocked and a cap on the nipple; the force of the ramming with the heavy iron ramrod jarred the hammer off and the ramrod was driven straight through his head entering above the eyebrow and making its exit at the vault of the skull through the wounds described above. The ramrod was found about 14 yards from the spot where he fell with his cap transfixed on it, as shown in Fig. 2.

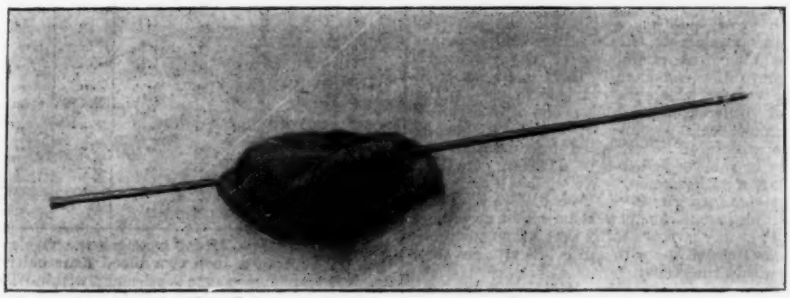
The patient's temperature was normal and his pulse was slow and regular; there was slight scorching of the face round the wound of entrance; and there was slight oozing of blood from both wounds, more from the wound of entrance than from that of exit. The patient though apparently

comatose could easily be roused and would answer questions in a dull, hazy manner, his answers, however, being perfectly rational. He could move all his limbs, but it was noticed that the movements of the right arm were clumsy and awkward; the limb was thrown about like a flail, there evidently being partial paralysis of the limb. There was marked dilatation of the left pupil, the right pupil being normal; though both reacted to light the left one was more sluggish than the right. It was decided to use expectant treatment and I had both wounds dressed antiseptically and an ice-bag applied to the head; perfect quiet and a purely milk diet were ordered. I saw the patient several times during the afternoon but there was no alteration in his condition; on visiting him in the evening, however, I decided to dress the wounds as there had been considerable oozing from the wound in the forehead. On removing the dressing it was seen that several small nodules of brain substance, varying from the size of a pin's head to that of a pea, had exuded from the wounds, the actual amount being about enough to cover a shilling. The paralysis of the right arm was more marked and the left pupil was more fixed. The patient's temperature was 99·2° F. and his pulse was quiet; he could easily be roused and answered questions quite well. I ordered an enema to be administered which acted satisfactorily. The patient passed a rather restless night and was at times very irritable. The same symptoms continued for four days, the temperature keeping fairly normal, never above 99·4° except on the second evening when it reached 100°. The paralysis of the arm became more marked though it could still be moved by the patient. The discharge of brain substance did not continue after the second day, the whole amount exuded being not more than of the size of a filbert nut. On the fifth day the patient became more conscious and would answer questions readily and would try to grasp things with his right hand when asked to do so. The same treatment was continued; an enema was administered every other day and the diet was confined entirely to milk. The patient never had any difficulty in passing his urine. From the fifth day the patient daily improved and without exhibiting a single bad symptom made an uninterrupted recovery and after three weeks in bed was allowed up and put on solid food. The paralysis of the arm during this time gradually improved and since has almost entirely disappeared, the patient expressing the condition of it by saying that he felt as if slight power had gone out of it, though he could write almost as well as ever he could. The wounds in the head were slow in healing and three weeks after the injury a small shell of bone of about the size of a split pea exfoliated from the wound of entrance, after which the wound healed perfectly. There is still a small superficial sinus in the wound of exit probably due to a small shell of bone which cannot be detected however with the probe. The patient now seems to be in perfect health and has put on weight since his admission to the hospital. His mental faculties seem quite intact and he has practically perfect use of his arm.

The above case, I take it, clearly shows that the brain can sustain injuries which one would consider to be absolutely fatal and yet will recover without any appreciable detriment to its structure although the parts injured were in the left frontal lobe of the brain, where some loss of function might be considered almost certain. No doubt the ramrod passed at a terrific velocity through the skull and brain structure; being made entirely of iron and of considerable weight it would cause less destruction of tissue than if the ramrod, as is usual, had been made of wood, as the velocity would have been less, the weight of the iron ramrod adding explosive power to the powder. My friend Mr. Sydney Jones of St. Thomas's Hospital saw this case about six weeks after the accident and pointed out the peculiarly shallow shape of the boy's skull over the frontal eminences; this I think makes the case still more extraordinary as had the ramrod passed entirely through grey matter one would think it must have destroyed some important centre. I think the ramrod penetrated the grey matter at the orifice of entrance and again at that of exit, the seat of the track being through the white substance. The wound must have been very near the centre for speech and also that for the movements of the arm. The speech was never impaired, the wound no doubt being above and internal to the centre; the centre for arm movement was also not touched or it must have been destroyed, the partial paralysis, I presume, being due to pressure from hæmorrhage through the wounded track of brain which must have been very near it; as the hæmorrhage abated the paralysis disappeared. For the most excellent photographs from which the illustrations are reproduced I am indebted to my friend Mr. W. A. Southwell, manager of the Stamford and Spalding Bank, at Spalding.

Spalding.

FIG. 2.



Reproduction of photograph showing the ramrod and cap as they were found.

VARIETIES AND VIRULENCE OF THE PNEUMOCOCCUS.[1]

BY J. W. EYRE, M.S., M.D. DURH.,
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AND
J. W. WASHBOURN, M.D., F.R.C.P. LOND.,
PHYSICIAN TO GUY'S HOSPITAL; PHYSICIAN TO THE LONDON FEVER HOSPITAL, &C.

THERE are a large number of types of the pneumococcus which differ from one another in virulence and in biological characters. At the one end of the scale is the parasitic type—the typical pneumococcus of the text-books. This type leads with difficulty a saprophytic existence; it will only grow at temperatures approaching that of the human body, it will not grow upon media which are faintly acid, and it rapidly dies out when cultivated upon agar or in broth. Rabbits inoculated with this type die from septicæmia and the blood after death is found to be crowded with diplococci. At the other end of the scale is the saprophytic type described by us in a previous paper[2] which was obtained from a typical pneumococcus by a special method of cultivation. This type grows luxuriantly at 37° C., and

[1] This investigation was aided by a grant from the Royal Society.
[2] Resistant Forms of the Pneumococcus, Journal of Pathology and Bacteriology, March, 1897.

at 20° C. in broth, and on agar, potato, and gelatin, whether acid or alkaline, and retains its vitality upon these media for many weeks. In correspondence with the luxuriant growth its morphology is different to that of the parasitic type; in place of isolated diplococci and streptococci large masses of cocci and diplococci are found, and forms divided into tetrads like the gonococcus are common. It is almost devoid of virulence and we were only successful in infecting one out of a large number of rabbits inoculated. From the blood of this animal we obtained a typical pneumococcus with the usual parasitic characters. Intermediate between these types are pneumococci which will grow at 20° C. although not so luxuriantly as the saprophytic type and which possess but slight virulence. Kruse and Pansini[2] in describing such varieties stated that they could be obtained by prolonged cultivation of typical pneumococci upon artificial media and that they could be reconverted into typical pneumococci by passages through rabbits. In the course of our investigations we had had frequent opportunities of confirming the observations of Kruse and Pansini, and we believe it to be well established that the types which grow best on artificial media are possessed of the least virulence. On the other hand, pneumococci with the biological characters of the "typical" pneumococcus may differ considerably from one another in virulence. The variety which we consider to possess the highest degree of virulence measurable is one which causes death from pneumococcic septicæmia, usually within 24 hours, at latest within 48 hours, when injected into the peritoneal cavity of rabbits in doses of 0·000001 of a loop holding about half a milligramme.[4] We shall call this pitch of virulence the *standard virulence*. We believe that the duration of life after inoculation is to some extent an indication of virulence; at any rate, we think that a pneumococcus which takes longer than 48 hours to kill is less virulent than one which kills within that time.

In this paper we are recording investigations upon four races of pneumococci obtained from different sources. The object of our investigations was, first, to determine the original biological characters and the initial virulence of each race; secondly, to raise the virulence to the "standard virulence" by repeated passages; and thirdly, to ascertain how long the standard virulence when once acquired could be maintained. The four races were obtained from the following sources: pneumococcus 1 and pneumococcus 2 were derived from the sputum of cases of pneumonia; pneumococcus 3 from the pus in a case of meningitis complicating pneumonia; and pneumococcus 4 from the saliva of a normal individual.[5] The method we adopted was to inoculate rabbits or mice with the material and to make cultivations on blood agar from the heart blood of the animals after death. (We used blood agar for cultivations because the pneumococcus retains its virulence for some time upon this medium.[6]) By cultivation on various media the biological characters were ascertained. The initial virulence was determined by inoculating measured quantities of the first cultivations into the peritoneal cavity of rabbits. For this purpose we used a special loop holding about half a milligramme. The pneumococcus was then passed through a series of rabbits, either directly or by intermediate culture on blood agar, and the virulence tested from time to time until it had reached the standard (0·000001 of a loop fatal within 48 hours). The power of maintaining the standard virulence was then tested by keeping the blood agar cultivations at 37° C. sealed so as to prevent drying. After a certain time fresh cultivations were made from these and the virulence was tested by inoculating rabbits with measured quantities.

PNEUMOCOCCUS NO. 1.

Origin.—Rusty sputum from a case of pneumonia (kindly sent to us by Dr. Toller).

A little of the sputum was inoculated into the subcutaneous tissue of a mouse. The mouse died in four days from pneumococcic septicæmia. Cultivations obtained from its heart blood exhibited the character of a typical pneumococcus.

The initial virulence was not determined very accurately, but two loops of a blood agar cultivation injected into the peritoneal cavity of a rabbit only caused death after five days.

Rabbit 178 received 2 loops of a blood agar cultivation from the heart blood of the mouse. The animal was unaffected for four days, but succumbed to pneumococcic septicæmia during the fifth day.

Passages to raise the virulence.—All inoculations were made into the peritoneal cavity.

Rabbit No.	Dose.	Source.	Result.	
178	2 loops of a blood agar cultivation	Mouse	Died in 5 days.	From pneumococcic septicæmia.
179	0·5 loop " "	R. 178	" 3 "	
180	1 " " "	R. 179	" 24 hours.	
181	0·5 " " "	R. 180	" 24 "	
182	0·1 " " "	R. 181	" 24 "	
183	0·05 " " "	"	" 24 "	
184	0·03 " " "	"	" 24 "	
187	0·003 " " "	R. 182	" 48 "	
188	0·001 " " "	R. 187	" 48 "	
190	0·00025 " " "	"	" 48 "	
191	0·0001 " " "	R. 190	" 48 "	
192	0·00005 " " "	"	" 48 "	
193	0·000025 " " "	"	" 48 "	
195	0·00005 " " "	R. 191	" 24 "	
196	0·000001 " " "	"	" 48 "	
197	0·000001 " " "	R. 195	" 24 "	

Final virulence.—After 8 passages the virulence was such that 0·000001 of a loop of a blood agar cultivation caused death from pneumococcic septicæmia within 24 hours.

Maintenance of virulence.—This pneumococcus was found to maintain the standard virulence in blood agar cultivations for nine weeks.[7]

PNEUMOCOCCUS NO. 2.

Origin.—Rusty sputum from a case of double basal pneumonia which recovered.

A rabbit (383) inoculated into the subcutaneous tissue over the abdomen with a portion of the sputum died in four days from pneumococcic septicæmia. Cultivations obtained from the heart blood exhibited the characters of a typical pneumococcus.

The initial virulence was not accurately determined, but one loop of a blood agar cultivation injected into the peritoneal cavity of a rabbit was only fatal after three days.

Rabbit 389 received 1 loop of a blood agar cultivation from the heart blood of the rabbit 383 intraperitoneally. The animal did not appear to be affected for the next three days, but was found dead on the fourth morning. Rabbit 390 received the remainder of the cultivation used in the preceding experiment and died within twenty-four hours from pneumococcic septicæmia.

Passages to raise the virulence.—All inoculations were made into the peritoneal cavity.

Rabbit No.	Dose.	Source.	Result.	
390	Whole blood agar cultivation	R. 383	Died in 24 hours.	From pneumococcic septicæmia.
391	Half " " "	R. 390	" 24 "	
393	" " " "	R. 391	" 48 "	
394	Whole " " "	R. 393	" 24 "	
395	" " " "	R. 394	" 24 "	
396	0·5 c.c. heart blood	R. 395	" 24 "	
397	0·1 c.c. " "	R. 396	" 24 "	
398	0·1 c.c. " "	R. 397	" 48 "	
399	1 loop of a blood agar cultivation	R. 398	" 48 "	
400	Whole blood agar cultivation	"	" 24 "	
401	0·1 c.c. heart blood	R. 399	" 24 "	
402	0·1 c.c. " "	R. 401	" 24 "	
404	0·00001 loop of a blood agar cultivation	R. 402	" 24 "	
403	0·000001 " " "	"	" 24 "	

[2] Zeitschrift für Hygiene und Infectionskrankheiten, Band xi., S. 370.

[4] Vide our paper Further Researches upon the Pneumococcus, Journal of Pathology and Bacteriology, January, 1898.

[5] With regard to the frequency of the presence of pneumococci in the mouths of normal individuals our own observations are limited to the examination of 11 medical men. In two we found pneumococci and pneumococcus No. 4 was derived from one of these.

[6] Vide Further Researches upon the Pneumococcus, Journal of Pathology and Bacteriology, January, 1898.

[7] Ibid.

Final virulence.—After eleven passages the virulence was such that 0·000001 loop of a blood agar cultivation was fatal within 24 hours from pneumococcic septicæmia.

Maintenance of virulence.—The following experiments show that the standard virulence was maintained in blood agar cultivation for 25 days, but that it had diminished in 36 days.

1. Rabbit 412 died in 24 hours after inoculation with 0·000001 loop of a cultivation from rabbit 419. A blood agar cultivation made from rabbit 412 was kept for 25 days. It was then transplanted to a fresh blood agar tube; 0·000001 of a loop of this cultivation caused the death of rabbit 434 from pneumococcic septicæmia in 24 hours.

2. Rabbit 485 died in 24 hours after inoculation with 0·000001 loop of a cultivation from rabbit 481. A blood agar cultivation made from rabbit 485 was kept for 36 days and was then transplanted to a fresh blood agar tube. From this tube rabbit 507 was inoculated with 0·000001 loop and rabbit 508 with 0·0001 loop. Rabbit 507 was unaffected and rabbit 508 died in 3 days from pneumococcic septicæmia.

PNEUMOCOCCUS No. 3.

Origin.—Pus from the meninges in a fatal case of pneumonia complicated by meningitis, pericarditis, and empyema.

A mouse inoculated with pus from the meninges died in four days from pneumococcic septicæmia. Cultivations obtained from the heart blood of the mouse exhibited all the characters of a typical pneumococcus.

The initial virulence was such that three loops of a blood agar cultivation failed to cause death when inoculated into the peritoneal cavity of a rabbit, whilst an entire blood agar cultivation introduced into the peritoneal cavity of another rabbit caused death within twenty-four hours.

Rabbit 320 received 3 loops of a blood agar cultivation from the heart blood of the mouse intraperitoneally. It was unaffected.

Rabbit 326 received the whole of a blood agar cultivation from the heart blood of the mouse intraperitoneally. It died in 36 hours from pneumococcic septicæmia.

Passages to raise the virulence.—All inoculations were made into the peritoneal cavity.

Rabbit No.	Dose.	Source.	Result.
326	Whole blood agar cultivation	Mouse	Died in 36 hours.
334	" " "	R. 326	" 24 "
335	" " "	R. 334	" 24 "
337	" " "	R. 335	" 24 "
338	" " "	R. 337	" 24 "
339	" " "	R. 338	" 24 "
341	1 loop of a blood agar cultivation	R. 339	" 24 "
340	0·01 " " "	"	" 3 days.
344	1 " " "	R. 341	" 24 hours.
343	0·01 " " "	"	" 24 "
342	0·001 " " "	"	" 5 days.
356	One-third blood agar cultivation	R. 344	" 24 hours.
358	One-half " "	R. 356	" 2 days.
364	0·01 loop blood agar cultivation	R. 358	" 24 hours.
363	0·0001 " " "	"	" 24 "
368	1·0 " " "	R. 363	" 24 "
369	0·00001 " " "	"	" 24 "
370	0·000001 " " "	"	" 24 "

Final virulence.—After 11 passages the virulence was such that 0·000001 loop was fatal in 24 hours from pneumococcic septicæmia.

Maintenance of virulence.—The following experiments show that the standard virulence was maintained in blood agar cultivations for as long as 38 days.

1. Rabbit 331, inoculated with 0·000001 loop of a cultivation from rabbit 329, died in 36 hours from pneumococcic septicæmia. A blood agar cultivation from rabbit 329 was kept for 26 days and was then transplanted to a fresh blood agar tube. Rabbit 345 inoculated with 0·000001 loop of this cultivation died in 24 hours from pneumococcic septicæmia.

2. A blood agar cultivation from rabbit 345 was kept for 38 days and was then transplanted to a fresh blood agar tube. Rabbit 349 inoculated with 0·000001 loop of this cultivation died in 24 hours from pneumococcic septicæmia.

PNEUMOCOCCUS No. 4.

Origin.—The saliva of a healthy individual.

Rabbit 424 inoculated into the peritoneal cavity with 1 c.c. of the saliva died in 48 hours from pneumococcic septicæmia. From the heart blood a typical pneumococcus was cultivated. This pneumococcus, however, grew scantily on gelatin at 20° C., but after one passage would no longer grow at this temperature.

The initial virulence was such that 1 loop of a blood agar cultivation was fatal, although 5 days were required to produce this result, whilst 0·1 loop did not cause death.

Rabbit 429 received 0·1 loop of a blood agar cultivation from rabbit 424 intraperitoneally. It was unaffected.

Rabbit 430 received 1 loop from the blood agar cultivation used in the preceding experiment. Death ensued in 5 days from pneumococcic septicæmia.

Passages to exalt the virulence.—All inoculations were made into the peritoneal cavity. (See Table on page 22.)

Final virulence.—After 43 passages the virulence was such that 0·001 loop was fatal, whilst 0·0001 loop was not. After 53 passages, however, the virulence was such that 0·000001 loop was fatal to a rabbit within 24 hours.

Maintenance of virulence.—The following experiments show that the standard virulence was not maintained in blood agar cultivations for 15 days, the minimal fatal dose at the end of that period being 0·00001 loop, whilst at the end of another week the virulence had still further decreased, the minimal fatal dose now being 0·1 loop.

1. Rabbit 499 inoculated with 0·000001 loop of a cultivation from rabbit 498 died in 36 hours from pneumococcic septicæmia. A blood agar cultivation from rabbit 499 was kept for 15 days and was then transplanted to a fresh blood agar tube. Rabbit 500 was inoculated with 0·001 loop of this tube, rabbit 501 with 0·0001 loop, rabbit 502 with 0·00001 loop, and rabbit 503 with 0·000001 loop. Rabbit 503 was unaffected; all the other animals died from pneumococcic septicæmia.

2. A blood agar cultivation from rabbit 499 was kept for 22 days and then transplanted to a fresh blood agar tube. From this tube rabbit 509 was inoculated with 0·1 loop and rabbit 510 with 0·01 loop. Rabbit 510 was unaffected, but rabbit 509 died in 3 days from pneumococcic septicæmia.

Remarks.—Briefly these investigations gave the following results:—

Pneumococcus 1 was derived from the sputum of a case of pneumonia. Its initial virulence corresponded about to a minimal fatal dose of 2 loops. It attained the standard virulence after 8 passages. This virulence was maintained for at least 9 weeks.

Pneumococcus 2 was derived from the sputum of a case of pneumonia. Its initial virulence corresponded about to a minimal fatal dose of 1 loop. It attained the standard virulence after 11 passages. This virulence was maintained for 25 days but had diminished in 36 days.

Pneumococcus 3 was derived from the pus in a case of meningitis complicating pneumonia. Its initial virulence corresponded about to a minimal fatal dose of the whole of a blood agar cultivation. It attained the standard virulence after 11 passages. This virulence was maintained for at least 38 days.

Pneumococcus 4 was derived from the saliva of a healthy individual. Its initial virulence corresponded about to a minimum fatal dose of 1 loop. It attained the standard virulence after 53 passages. This virulence was not maintained for 15 days and in 22 days it had diminished almost to the initial virulence. This pneumococcus at first grew scantily on gelatin at 20° C., but after one passage would no longer grow at this temperature.

These results show that the four races of pneumococci could be raised by repeated passages to the highest degree of virulence measurable. This result taken in conjunction with what we have previously stated about types of pneumococci shows that the various types represent varieties which are mutually convertible. On comparing our four races it will be seen that pneumococcus 1, pneumococcus 2, and pneumococcus 3 did not differ very materially from one another. They possessed about the same initial virulence, the standard virulence was attained in less than a dozen passages, and it was maintained for a considerable period. All these races were derived from pathological lesions in the human subject.

Rabbit No.	Dose.	Source.	Result.	
430	1 loop of a blood agar cultivation	R. 424	Died in 5 days.	From pneumococcic septicæmia.
431	Whole blood agar cultivation	R. 430	,, 24 hours.	
435	,, ,, ,,	R. 431	,, 24 ,,	
436	0·1 c.c. heart blood	R. 435	,, 24 ,,	
437	Whole blood agar cultivation	R. 436	,, 4 days.	
438	,, ,, ,,	R. 437	,, 2 ,,	
439	0·1 c.c. heart blood	R. 438	,, 24 hours.	
440	0·1 c.c. ,, ,,	R. 439	,, 24 ,,	
441	0·1 c.c. ,, ,,	R. 440	,, 24 ,,	
442	0·1 c.c. ,, ,,	R. 441	,, 24 ,,	
443	Whole blood agar cultivation	R. 442	,, 24 ,,	
445	,, ,, ,,	R. 443	,, 24 ,,	
446	0·1 c.c. heart blood	R. 445	,, 48 ,,	
447	0·1 c.c. ,, ,,	R. 446	,, 48 ,,	
448	0·1 c.c. ,, ,,	R. 447	,, 24 ,,	
449	0·1 c.c. ,, ,,	R. 448	,, 20 ,,	
450	0·1 c.c. ,, ,,	R. 449	,, 24 ,,	
451	1 loop of a blood agar cultivation	R. 450	,, 24 ,,	
452	1 ,, ,, ,,	R. 451	,, 4 days	
453	1 ,, ,, ,,	R. 452	,, 48 hours.	
454	0·1 c.c. heart blood	R. 453	,, 4 days.	
457	Whole blood agar cultivation	R. 454	,, 24 hours.	
459	Half ,, ,, ,,	R. 457	,, 3 days.	
460	,, ,, ,, ,,	R. 459	,, 5 ,,	
461	0·1 c.c. heart blood	R. 460	,, 3 ,,	
462	0·1 c.c ,, ,,	R. 461	,, 24 hours.	
463	0·1 c.c. ,, ,,	R. 462	,, 24 ,,	
464	1 loop of a blood agar cultivation.	R. 463	,, 24 ,,	
465	0·1 c.c. heart blood	R. 464	,, 15 ,,	
467	Whole blood agar cultivation.	R. 465	,, 48 ,,	
469	0·1 c.c. heart blood	R. 467	,, 48 ,,	
470	0·1 c.c. ,, ,,	R. 469	,, 24 ,,	
471	0·1 c.c. ,, ,,	R. 470	,, 24 ,,	
472	1 loop blood agar cultivation.	R. 471	,, 24 ,,	
474	0·1 c.c. heart blood	R. 472	,, 24 ,,	
475	Whole blood agar cultivation	R. 474	,, 24 ,,	
476	,, ,, ,,	R. 475	,, 24 ,,	
477	,, ,, ,,	R. 476	,, 24 ,,	
478	Half blood agar cultivation	R. 477	,, 48 ,,	
479	,, ,, ,,	R. 478	,, 24 ,,	
480	,, ,, ,,	R. 479	,, 24 ,,	
482	,, ,, ,,	R. 480	,, 48 ,,	
483	,, ,, ,,	R. 482	,, 24 ,,	
484	,, ,, ,,	R. 483	,, 36 ,,	
488	0·01 loop of a blood agar cultivation.	R. 484	,, 24 ,,	
486	0·0001 ,, ,,	,,	Unaffected.	
489	Whole blood agar cultivation.	R. 488	Died in 72 hours.	From pneumococcic septicæmia.
490	0·1 c.c. heart blood	R. 489	,, 48 ,,	
491	0·1 c.c. ,, ,,	R. 490	,, 24 ,,	
492	0·1 c.c. ,, ,,	R. 491	,, 24 ,,	
493	0·1 c.c. ,, ,,	R. 492	,, 24 ,,	
494	0·1 c.c. ,, ,,	R. 493	,, 24 ,,	
495	0·1 c.c. ,, ,,	R. 494	,, 24 ,,	
496	0·1 c.c. ,, ,,	R. 495	,, 24 ,,	
497	0·1 c.c. ,, ,,	R. 496	,, 24 ,,	
498	0·1 c.c. ,, ,,	R. 497	,, 24 ,,	
500	0·00001 loop of a blood agar cultivation	R. 498	,, 24 ,,	
	0·000001 ,, ,,	R. 498	,, 24 ,,	

Pneumococcus 4 differed in several interesting respects from the other three. In the first place, it was derived from the saliva of a healthy individual and t is probable that it had been living in the mouth without producing any pathogenic effect for some considerable period. Secondly, it showed traces of having led a saprophytic existence by its capability of growing at 20° C. Thirdly, although its initial virulence was not below that of the other races there was great difficulty in raising it to the standard. It only reached this point after 53 passages (many more rabbits were inoculated than the 53 mentioned, for by using too small a dose we often met with failures in the passages and were then compelled to "hark back"). Fourthly, after the standard virulence had once been reached it very quickly diminished in the cultivations. The virulence had diminished in 15 days and in 22 days it had fallen almost to as low a point as it was initially.

In short, this particular race of pneumococcus which had been living a saprophytic existence in the mouth possessed a low capacity for acquiring and a low capacity for retaining a high degree of virulence. The other three races which had been leading a parasitic existence in the human body possessed, on the contrary, great capabilities both for acquiring and for retaining a high degree of virulence. These investigations, therefore, show that in describing varieties of the pneumococcus, besides the biological characters and the initial virulence, the power of acquiring and of retaining a high degree of virulence must be taken into account.

A REMARKABLE CASE OF MULTIPLE GROWTHS OF THE SKIN CAUSED BY EXPOSURE TO THE SUN.

(WITH COLOURED ILLUSTRATION.)

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I FIRST saw the patient whose case I am now about to describe through the kindness of my colleague Mr. Herbert Allingham in July, 1898. The patient was a powerful and robust man, aged thirty-five years; he was of Scotch extraction but was born in South Africa. As a boy he was of a very fair complexion and he remembered that the rays of the sun used to scorch him and hurt his skin. For twenty years his occupation had exposed him constantly to the fierce blaze of a South African sun. His hands, his face, and his neck would, to use his own phrase, "turn red all over" and would burn and "swell" constantly. Numerous dark patches appeared, especially on the face, and these were remarked by himself and by other people. The continued story of his case I give in his own words: "In 1891 I had what looked like a wart taken off the right side of my nose. I never noticed anything more until about the middle of 1895 when I went to a doctor and he scraped the nose and also under the eye and neck. It seemed to be right for a month or two and then started getting worse than before, with hard lumps under the skin. In December, 1896, they put me under chloroform and took the lumps away. I had to go under the same operation in June, 1897. Since then I have had nothing done until I saw you."

The following is an account of the remarkable appearances presented by this patient. The skin of the face and neck was deeply sunburnt and covered with dark-brown freckles, presenting the appearance so commonly seen in seafaring men of fair complexion. The backs of the hands were deeply pigmented and tanned. Numerous growths were studded about the skin of the face and neck which varied in size from a small shot to a hazel nut. The smaller growths had the appearance of warts; the larger ones were irregular in contour, a little pink, with slight marking of arborescent vessels, and several covered with yellowish scales, which when detached sometimes left a raw surface beneath. A well-marked growth of the size of a small haricot bean occupied the left lower eyelid. It was pink in colour (see Fig. 1) and firm and indurated in texture, being

Fig. 1.

Fig. 2.

Fig. 3.

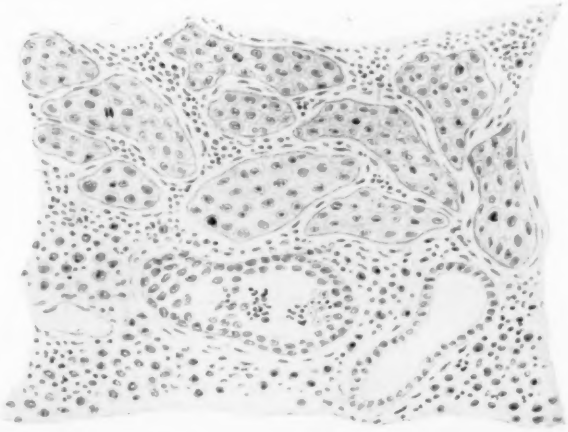

Fig. 1.

Showing the scorched appearance of the skin, the pigmentation and the warty appearance of the growths.

Fig. 2.

General view, showing the distinction between the new growth and the surface epithelium.

Fig. 3.

Showing the glandular arrangement of the rapidly growing epithelial cells.

TO ILLUSTRATE MR. A. M. SHEILD'S PAPER ON "GROWTHS OF THE SKIN."

obviously a neoplasm of serious import. On the right side of the neck was a tumour of a similar nature of the size of a small walnut. There was a scar adjacent to it and the patient stated that the tumour had rapidly returned after removal. The growths, if the tiny ones had been reckoned, were almost innumerable. The backs of the hands curiously enough were quite free. There were, moreover, atrophic patches in the skin of the face, but it was difficult to determine how far these were really dependent upon the result of the numerous operations which the patient had undergone or upon the shrinkage of growths. The numerous tumours were not the only remarkable feature in this case. In many places apart from the distinct freckles were patches of a blackish colour, indeed almost melanotic in appearance. On the nose and also on the upper lip beneath the hair of the moustache were small distinctly verrucose patches covered with seborrhœic scales. The parts were the seat of itching and burning, but on careful examination none of the neighbouring groups of lymphatic glands could be felt enlarged. The painting of part of the face by Miss Mabel Green excellently illustrates the conditions seen.

All sorts of opinions had been expressed regarding this case. The patient remembered the terms "leprosy," "lupus," and "syphilis" as having been used in his hearing, but as regards the latter affection there was no evidence of any kind. The likeness to Kaposi's disease was at once evident and though there were some differences between this case and instances of xeroderma pigmentosum as seen in children I did not hesitate to place the case in this category, and Dr. J. J. Pringle, who also saw the patient, was much of the same opinion. On July 11th I removed all the growths I could find by oval incisions. The operation on the eyelid needed special precautions to obviate subsequent ectropion. The growth in the neck, though it seemed very superficial, infiltrated the sterno-mastoid muscle. Some of the muscle had to be removed together with superficial cervical nerves. The numerous oval incisions were united by horsehair. The operation was of necessity extremely tedious. The healing after the operation was speedy and the verrucose patches and smaller growths were treated by salicylic acid plaster mulls. Finally the skin was well anointed with a weak preparation of red oxide of mercury in lanoline. The ultimate result was excellent, the appearance of the patient being strikingly improved. Dr. Galloway kindly undertook the minute examination of the tumours and the following most interesting description is from his pen. The blocks well illustrate the conditions he describes.

"The lesion consists of a small superficial ulcer overlying new growth, the floor of which is occupied by broken-up epithelial débris. At the edge of the ulcer the epidermal epithelium stops abruptly and the margin of the epithelium may even be a little turned down towards the base of the ulcer. The epidermis at the margin and for a little distance is thickened, the main increase being in the cells of the prickle layer so that a true 'acanthosis' has been brought about. In this situation the epidermis is raised up occasionally in a pointed form and at the same time the interpapillary cones of epithelium being overgrown complex epithelial interlacings are formed resembling the structure of condyloma acuminatum (Fig. 2). Underlying the ulcer and its borders of altered epithelium there is a mass of new epithelial growth the cells of which both in their form and in their arrangement differ from any of the well-known forms of growth from the surface epithelium (Fig. 3). These cells are spheroidal in shape and the contour of the acini in which they occur and the general arrangement of the growth is that of a spheroidal-cell glandular carcinoma. In places this new growth and the surface epithelium are in contact with each other and their different characters may be readily contrasted. Surrounding this nodule of new growth are numerous sweat-glands and their ducts. There even seems to be an unusual number of these glands in this situation; at any rate, they are very distinct and may be seen occasionally to pass into, and to be in actual continuity with, the new growth. Round some of the groups of the coil glands may be seen clumps and masses of round-celled infiltration of the character usually seen surrounding an advancing carcinoma. The fibrous framework of this carcinoma is slight, being composed of fine lines of connective tissue fibre. The growth seems to be a spheroidal-cell carcinoma commencing in the sweat-glands."

There are few remarks to be made regarding this case. Some of the forms of carcinoma attacking the glands of the skin are exceedingly ill-defined. A reference to authorities will show that the nomenclature of these rare and interesting cases is still rather perplexing. When a sufficient number of such cases have been carefully reported upon and collated their nomenclature and classification may be then satisfactorily managed. Such is hardly the case at present.

As regards the prognosis of this case a word may be said. It is probable that these growths are extremely local, and their progress in respect of malignancy and recurrence and involvement of glands and other organs feeble and slow. Accordingly we may hope for ultimate good results if (1) the groups of nodules be extirpated freely as they enlarge; and (2) if the cause which produces them be removed. In the present instance the patient has for private reasons to return to South Africa, so I much fear that the affection will progress. He has been instructed to wear a broad-brimmed hat and to keep the skin anointed with an emollient preparation. The influence of the sun in producing his malady has been clearly explained to him and he has been instructed to expose himself as little as possible. It is unfortunate that residence in a cold climate is not feasible in his case.

Cavendish-place, W.

DERMATITIS AND OTHER TOXIC EFFECTS PRODUCED BY BORIC ACID AND BORAX.[1]

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BORIC acid was first prepared in a crystalline form by Homberg in 1702 and was introduced into medicine under the name of "Homberg's sedative salt," and sedative, anodyne, and anti-spasmodic properties were ascribed to it. Cullen refers to it in his "Materia Medica" and states that he had given it in large doses without observing any effects. In 1844 the medical faculty of Munich offered a prize for the best essay on the pharmacological properties of boric acid and borax which was gained in 1848 by Dr. Binswanger and published in the *Repertorium für die Pharmacie*. Dr. Binswanger described many experiments with boric acid. He considered it to be comparatively inert. Doses of from 1 dr. to 3 dr. caused some gastro-intestinal irritation and smaller doses were readily absorbed and excreted by the urine in from fifteen minutes to thirty hours. Borax resembled the carbonate of soda; in large doses it caused gastro-intestinal irritation; smaller doses were absorbed and could be found in the bile, in the saliva, and in the portal blood. On Dr. Binswanger himself it produced an impetiginous eruption and was excreted by the kidneys. Borate of potash and borate of ammonia resembled borax in their action. After 1848 the use of boric acid in medicine seems to have almost disappeared; it was not included in the British Pharmacopœia, except as a test for turmeric in rhubarb, until 1885 when its value as a non-irritating antiseptic had led to its extensive use for lotions and ointments and for internal administration in diseased conditions of the bladder.

In addition to its medicinal use boric acid or borax is largely employed as a food preservative and it has been added to milk, butter, and other foods, more especially in hot weather, in order to delay or prevent decomposition. The quantity added to milk may reach 0·3 per cent., as in a case mentioned in THE LANCET of July 17th, 1897. This would amount to about 26 gr. per pint of milk and would constitute a very large dose for an infant or invalid on milk diet. Whether the temporary addition of small quantities of boric acid or borax to food is harmful or not is a matter which requires further investigation, but there is ample evidence that in certain persons either habitual use in medicinal doses or rapid absorption of a large quantity of the drug may sometimes cause serious and even fatal symptoms.

A number of cases have now been recorded showing the occasional toxic effects of boric acid externally applied or injected into the cavities of the body. The following instances may be referred to as illustrating the different

[1] A paper read before the Manchester Therapeutical Society on Nov. 1st, 1898.

ways in which intoxication may be produced. Moledenkow[2] reports 2 cases in one of which a pleural cavity and in the other a lumbar abscess cavity were washed out for an hour with a large quantity of a solution (5 per cent.) of boric acid. The next evening erythema appeared on the face and spread to the neck, trunk, and thighs. Both patients died—one on the fourth day and the other on the fifth day. Bruzelius[3] reports a case in which a widespread erythema appeared after a few days' use of two pints of a solution (4 per cent.) of boric acid which had been injected into the rectum in a case of chronic diarrhœa in which the patient recovered. Johnson[4] reports a similar case in which the injection of 3 6 grammes of boric acid was followed by headache, fever, injection of the conjunctivæ, and an erythematous, papular, and bullous eruption on the skin. The drug was easily detected in the urine. Hogner[5] reports 3 cases of intoxication following the use of boric acid solution for washing out the stomach. There was general depression with an erysipelatous eruption on the face, purpuric spots on the body, vomiting, diarrhœa, and blood in the urine, and death resulted in one of the cases. Welch[6] records cases following the use of vaginal tampons of boric acid in which were present formication and burning of the skin (chiefly of the face, hands, and feet), severe depression, and afterwards desquamation. In these cases the patients recovered. Lemoine[7] met with a case of intoxication after dressing a bed-sore with boric acid. Dr. Arthur Hall[8] reports a case of extensive burns treated by boric acid ointment in which on the fifth day an erythematous eruption appeared and affected the limbs, the trunk, and the face. The patient died on the ninth day and a necropsy revealed no organic cause for death.

Cases of intoxication following the internal administration of boric acid are fewer in number, but Corlett[9] saw 6 cases when treating diphtheria with 1 drachm doses of the drug. Poisoning by borax is most frequently due to its internal use for long periods in the treatment of epilepsy. Three cases of psoriasis following this use of borax are reported by Gowers[10] and the observation is confirmed by Liveing.[11] Stille[12] confirms the observation of Binswanger already referred to regarding the production of an impetiginous eruption on the skin. Ch. Féré and Lamy[13] report two cases of an eczematous eruption caused by the internal administration of borax with a photograph of one case. Dr. Féré[14] gives an exceedingly full account of his observations upon epileptic patients treated by borax. He found that in some cases intestinal irritation, nausea, and vomiting were produced. The skin and mucous membranes were dried, the lips were fissured, the hairs became dry and fell out, and the nails were often striated. On ceasing the drug the hair again grew and became thick. Psoriasis might appear but a special form of eruption was more common, resembling in some points the seborrhœic form of eczema. Papules and little red-bordered circles first appeared; they became scaly, enlarged, and ran together to form extensive patches, often symmetrical. The scalp, the arms and the hands, the flanks, and the lower parts of the abdomen were most frequently affected, but the eruption might become general. In other cases the eruption was more scarlatiniform and the desquamation finer; petechiæ might be present or in other cases furunculi. Œdema of the extremities was frequently found, sometimes of the face as well, and albumin might be present in the urine. When extensive tracts of skin were affected there was a cachectic state and loss of flesh. The onset of uræmia in renal cases was hastened by the ingestion of borax. The drug could be readily found in the urine and was detected in from 25 to 30 minutes after a dose of 4 grammes of borax; in one patient who had taken 10 grammes per day for some time it was still present in the urine forty-one days after the last dose and in another case it was found fifty-three days after cessation of the drug. Both these cases had albumin in the urine.

My attention was first directed to the toxic effects of boric acid by the case of a man, aged thirty-eight years, of somewhat alcoholic habits, who had never suffered from eczema or psoriasis. At twelve years of age he had a severe attack of scarlet fever, at the age of sixteen years he had acute rheumatism, and at eighteen years of age gonorrhœa and syphilis for which he was properly treated and after a mild attack of secondaries he had no further syphilitic manifestations. He contracted gonorrhœa several times and about twelve years previously to my seeing him symptoms of stricture of the urethra appeared and were treated so that for some years he suffered little inconvenience. In 1896, however, the stricture became troublesome and micturition was difficult, painful, and frequent and the urine was offensive and alkaline and contained pus. About the middle of March, 1896, he commenced to take boric acid (10 grains three times a day) and the condition of the urine improved. Early in May he noticed that the hair on his head was falling out and that the scalp was red and scaly. The hands and forearms became red, slightly swollen, and presented scaly patches on the flexor surfaces. In this condition I first saw him. I considered the case one of seborrhœic dermatitis presenting some unusual features. As the urine was then clear and contained no pus and only a small quantity of albumin the boric acid was discontinued, though at that time there was no suspicion that the drug had any relation to the skin disease. Ordinary local treatment was adopted and he very soon improved and was well in July, but in August the bladder symptoms were again troublesome and he recommenced taking boric acid as before. At the beginning of September the skin eruption reappeared in a more severe form and by the end of the month it involved the scalp, the trunk, and all the limbs. The affected skin was of a bright red colour and covered with profuse scales of a slightly greasy character. The patches of disease were irregular in shape, roughly symmetrical in distribution, and very extensive in area, leaving smaller patches of healthy skin on the trunk and the proximal parts of the limbs. The hands and forearms and the feet and legs below the knees were uniformly red, scaly, swollen, and they pitted on pressure. Desquamation on the palms and soles occurred in large flakes. The scalp was red and scaly, the hair had almost entirely disappeared from the head and was very thin on the face and pubes. The face presented only a few scaly papules. Digestion was disturbed, the appetite was poor, and there was marked debility and anæmia with loss of flesh. The coincidence of the outbreak with the resumption of the boric acid led me to suspect the drug as being the cause of the eruption, especially as the symptoms agreed closely with those described by Féré in patients taking borax. The administration of boric acid was stopped immediately and a mild sedative ointment was prescribed for the skin; improvement was rapid and by Christmas he was practically well and had a good crop of healthy hair growing on the scalp. He remained well until May, 1897, when the bladder symptoms were again troublesome and led him to resort to the boric acid which undoubtedly gave him relief. In June the eruption on the skin again appeared, but to a much less extent as he stopped the drug on the first outbreak of dermatitis. In July he was fairly well, but in August he gave way to alcoholic excess, developed uræmic symptoms, and died comatose. Whether he took any boric acid in July or August is not known but the observations of Féré as to the influence of borax in hastening the onset of uræmia in patients with renal disease are particularly interesting in this connexion. In this case there were three distinct attacks of dermatitis, each one occurring a few weeks after commencing to take boric acid. The chief features of each attack were a diffuse widespread scaly eruption, œdema of the extremities, loss of hair, anæmia, and loss of flesh, and recovery always occurred under simple treatment when the drug was discontinued. The diagnosis rested between the toxic effects of boric acid, seborrhœic dermatitis, pityriasis rubra, psoriasis, and syphilis, and a careful consideration was given to each of these diseases before the diagnosis of boric acid intoxication was made.

By the kindness of Dr. J. S. Bury I was recently enabled to examine a man, aged fifty years, who had suffered from epilepsy for over twenty years. In June, 1898, he commenced to take a mixture containing 10 grains of boric acid and 15 grains of borax three times a day. Early in August the hands began to swell and they became red and painful

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[2] Petersburger Medicinische Wochenschrift, 1881; THE LANCET, May 6th, 1882.
[3] Hygeia, 1882.
[4] Nordisk Medicinisches Archiv, 1885, Band xvii.
[5] Eira, 1884.
[6] New York Medical Journal, 1888.
[7] Gazette de Médecine de Paris, 1890.
[8] THE LANCET, April 11th, 1896.
[9] Journal of the American Medical Association, 1890.
[10] Epilepsy and other Chronic Convulsive Diseases, 1881; THE LANCET, Sept. 24th, 1881.
[11] Handbook of Skin Diseases, fifth edition, p. 424.
[12] National Dispensatory, 1880.
[13] Nouvelle Iconographie de la Salpétrière, tome ii., 1889.
[14] Revue de Médecine, tome xv., 1895; THE LANCET, Oct. 12th, 1895, p. 932.

and desquamated, and the feet, the head, and the body were successively affected in a similar manner. On examination there was œdema of the forearms and hands, also of the legs and feet, and the skin was red and scaling freely. The thighs and the lower part of the trunk presented red scaly patches at the periphery of which minute discrete red papules could be seen. The scalp was red and scaly and bald on the crown and the hair which remained was very thin. There were a few scaly patches and pustules on the face. Several boils were found on the thighs, the genitals, and the shoulders. There was no history of any form of skin disease before taking the boric acid and borax.

During the past year I have administered boric acid to nearly 40 patients who were likely to derive benefit from the drug and I have carefully watched the cases. In no case has any bad effect followed, though one patient has taken the drug continuously for four months. In one case, that of a man, seventy years of age, who took 80 grains of boric acid per day in divided doses for four weeks, there was a distinct flushing and redness of the skin with the appearance of slight albuminuria. The urine was normal before taking the boric acid and the albumin disappeared about two weeks after it was discontinued. I have taken boric acid myself in 15 grain doses without any inconvenience. On one occasion I took 120 grains within four hours. The result was nausea but no vomiting, and colicky pains in the abdomen, followed by diarrhœa seven hours after the first dose, which continued during the night and the following morning. On the next day I suffered from slight headache, a feeling of depression, a want of appetite, and a marked flushing of the skin. The urine was increased and 60 oz. were passed in the twenty-four hours following the first dose. It contained free boric acid which was present in that which was first passed four hours after taking the drug and could still be found twenty-six hours after, but it could not be detected forty-four hours after the administration. A portion of the urine was evaporated to dryness and incinerated, the ash being repeatedly extracted by 90 per cent. alcohol until there was no green tinge in the flame when the alcohol was ignited. The residue was again ignited, acidified by sulphuric acid, and mixed with alcohol, and on igniting the alcohol a green flame was at once produced. From these experiments I conclude that while a great part of the boric acid is excreted unchanged a certain portion is converted into borates (probably sodium) and excreted in that form. I was unable to make a quantitative determination owing to the fact that as boric acid volatilises in the presence of steam a large part was lost in the process of evaporating the urine.

Experiments upon animals have been performed by J. Neumann,[15] who found that dogs weighing 15 kilos. could tolerate from 5 to 6 grammes of boric acid without other injury than fall of temperature, but larger doses caused in addition vomiting and diarrhœa. Quantities up to four grammes were injected into the pleural and peritoneal cavities in a three per cent. solution without causing inflammation; a five per cent. solution, however, excited peritonitis. Large doses (10 grammes or more) caused death through nerve and muscle paralysis. Rabbits, pigs, horses and fowls gave similar results.

From a review of the recorded cases of intoxication from the use of boric acid and borax it seems clear that two forms must be distinguished—one in which a large quantity of the drug is rapidly absorbed from the alimentary canal, from a serous or other cavity, or from an extensive raw surface; in these cases vomiting and diarrhœa, general depression, and partial paralysis of the nervous and muscular systems occur and may cause death. A rash is noted in many of the cases, especially where the patient recovered or lived some days after the absorption of the drug. The other class of cases results from the administration of boric acid or borax in comparatively small doses for long periods, and the symptoms appear at a variable time after the commencement of the drug. In some of these cases it is mentioned that the kidneys were diseased, in other cases albumin appeared in the urine, and in several cases ending fatally uræmic symptoms are described. Whether the condition of the kidneys or an individual idiosyncracy in regard to the drug is the determining factor in causing toxic symptoms requires further investigation, but it is an important fact that the great majority of persons taking boric acid or borax do so without any injurious consequences. The very rapid elimination of boric acid by healthy kidneys may perhaps explain this immunity.

It is possible that cases of intoxication occur more frequently than is at present recognised. Boric acid may be taken in food without the knowledge of the patient or the medical attendant, and a case of toxic skin eruption resembling eczema, psoriasis, or exfoliative dermatitis may easily be put down as an unusual form of one of these diseases. About four years ago I saw a patient—a female nearly sixty years of age—with extensive desquamative dermatitis affecting the scalp, the limbs, and the lower part of the body, with œdema of the legs and the arms. She died in three weeks and the diagnosis of seborrhœic eczema, though appearing most likely from the character of the eruption, was unsatisfactory in view of the œdema and the fatal termination. Looking back over the notes of the case there is room for suspicion that it may have been one of unrecognised boric acid poisoning.

Neumann states that from 1 part of boric acid in 1000 to 1 in 500 is sufficient to preserve milk. These amounts are not infrequently exceeded. It may be noted that even 1 in 500 corresponds to 17·5 grains per pint and constitutes a very large dose for an infant on milk diet and is likely in some cases to produce disturbance of the alimentary canal. In ordering milk diet for cases of kidney disease it ought also to be ascertained that the milk supplied is free from excess of boric acid or borax. The use of boric acid or the borates in surgery and their internal administration, though usually free from danger, ought to be carefully guarded in patients whose kidneys are diseased, and immediately discontinued should dermatitis or other toxic symptoms appear. In suspected cases the examination of the urine for boric acid and borax may afford valuable evidence of the absorption of the drug.

Manchester

[15] Archiv für Experimentelle Pathologie und Pharmacologie, 1881.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

HYDATID CYST OF THE AXILLA IN A CHILD.

BY P. J. THOMSON, M.R.C.S. ENG., L.R.C.P. LOND.

ON Nov. 14th, 1898, a strong, healthy-looking little Flemish girl was brought to my clinique by her mother who was very anxious to have the child relieved of a swelling in the right axilla. The mother stated in answer to questions that the child was just two years old and but for the swelling had always been perfectly healthy. She also said that the child had had nothing but the breast until she was six months old when she was fed like all the other members of the family. The swelling was first noticed when the child was six weeks old; it was then of about the size of a pea. It appeared to remain stationary for about a year and began to increase in size and gradually attained its present volume. The child had never appeared to suffer any inconvenience or pain of any kind in the tumour.

On examination a hard, globular, freely moveable mass of about the size of a large marble was found close to the lower edge of the right pectoralis major. The mass was not tender to the touch and examination appeared to cause the child no inconvenience whatever. The little girl was florid and healthy-looking without a trace of any constitutional affection. Both my friend and colleague Dr. Nisot and myself were rather at a loss as to the nature of the tumour. We put aside at once the idea that it might be a glandular swelling. The hardness of the mass reminded one of tumours of a fibrous nature, but neither of us could remember having met with or read of cases of fibrous tumours in so young a child. Finally, we came to the conclusion that we had to deal with a cyst with very thick walls, possibly a dermoid cyst. The mass was removed a few days afterwards by a simple incision through the skin and subcutaneous fatty tissue. I found it less easy to enucleate than I had expected, as it had rather firm adhesions to the pectoralis major muscle. The wound healed by first intention. On cutting through the tumour we found it was a

cyst with very thick walls. The cavity was of about the size of a pea and contained clear watery-looking fluid in which floated a thin, very delicate membrane. Under the microscope this membrane showed no traces of organised tissue or epithelium, but appeared as a transparent membrane covered with calcareous particles. Attached to the end was a small vesicle apparently of the same structure through the wall of which could be seen a circle of hooklets. By careful manipulation I succeeded in making the head of the echinococcus to protrude. It had four large suckers and a corona of twenty hooklets placed in two more or less distinct rows.

Hydatid cysts do not appear to have been frequently met with in this position. Davain in his "Traité des Entozoaires" (second edition) mentions two cases of hydatids in the axillary region and one in the pectoralis major muscle. In THE LANCET of August 17th, 1895, Dr. W. J. Collins reported a case of hydatid cyst of the right axilla which was operated on by him and in which "the diagnosis remained uncertain until the operation, although fatty tumour and chronic abscess had been suggested." With regard to the origin of the hydatid cyst in my case, the mother of the child informed me that the water-supply of their farm was derived from a well and that she had often noticed it to be full of insects and living organisms. She also stated that the child had from an early age shown a great liking for raw meat and uncooked vegetables. Personal hygiene did not appear to be one of the mother's strong points.

Brussels.

VIABILITY IN CHILDREN.

BY C. H. L. JOHNSTON, M.D., L.R.C.S. EDIN.

THE following case is worth recording. A married woman, the mother of two children, who had been a patient under my care for about ten years, was visited by me and delivered of a living male infant at 4 A.M. on Dec. 2nd, 1898. She stated that she had last menstruated on June 6th, 1898, that she felt the movements of the child about the middle of October, and considered herself six months pregnant. The infant was very small; his skin was of an intense red colour, much wrinkled, and covered with a down, and there was an absence of sebaceous matter. Not deeming it advisable to use water I directed the nurse to wipe the child and after enveloping him in flannel placed him in bed beside the mother. At first some diluted sweetened milk was given which the stomach rejected. The day after his birth he weighed 11lb. 13oz. avoirdupois and his length was 12½ in. More diluted milk was given which was retained and also a few drops of port wine. Although he was kept in a room at a uniform temperature, was covered with flannel, and took a small quantity of nourishment, he did not possess sufficient vital energy to keep the body warm, and he died on the evening of Dec. 4th, having survived his birth two and a half days. Assuming conception to have taken place after the last menstruation the duration of gestation would be 178 days or under six months.

St. John, New Brunswick.

THE TOPICAL USE OF QUININE IN LEUCORRHŒA.

BY W. WRIGHT HARDWICKE, M.D. ST. AND., M.R.C.P., L.R.C.S. EDIN.

QUININE topically applied to the mucous surfaces of the cervix uteri and vagina was suggested by the good effects accidentally manifested by this drug when used in the form of pessaries though for quite a different purpose. A patient, the mother of six children, who had been a sufferer from the above complaint for some years, having used the various remedies usually prescribed in such cases but with only temporary benefit, her trouble sooner or later recurring, adopted the use, from prudential motives, of what I found to be quinine pessaries. I learned from her that since using them not only had her leucorrhœa disappeared but her general health had improved also. Though she had been in the habit of using from two to four of these pessaries a week for a period of over two years she had never suffered any ill-effects such as quinism. I have since used quinine topically in several cases of simple leucorrhœa and in every case with great success—in fact, I do not know of a single instance in which it has failed or in which quinism has been produced. It may be used in the form of douche or pessary. I adopt the latter form as being obviously the better one, the drug having a better chance of closer and more continuous contact with the congested membrane. I prescribe three grains of the hydrobromate in a half-drachm pessary in combination with oleum theobromatis, but the pessus quininæ of the "Extra Pharmacopœia" containing the hydrochloride answers just as well. One insertion a day is generally sufficient, a good result being very soon manifest.

It is a matter of astonishment that quinine in the form of pessary has never been used before in the treatment of leucorrhœa and ulceration, for its valuable properties—tonic, astringent, and antipyretic—suggest it as a useful remedy in such cases, but I can find no record of such in any of the well-known works on the subject.

East Molesey.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE OF RUPTURE OF THE SMALL INTESTINE WITHOUT EXTERNAL WOUND; ABDOMINAL SECTION; SUTURE; RECOVERY.

(Under the care of Mr. W. J. WALSHAM.)

IN the Mirror of Hospital Practice we published recently[1] an account of an interesting case at St. Thomas's Hospital, under the care of Mr. W. H. Battle, in which the intestine ruptured without external wound was sutured and the patient survived the operation nearly a month, dying finally from an abscess behind the liver. In the following case also the intestine was torn without any wound of the abdominal wall and the very successful result may be in great part attributed to the short interval (less than two and a half hours) which elapsed between the accident and the operation. In some introductory remarks to the case already mentioned we pointed out that disappearance of liver dulness was by no means invariably found in rupture of the stomach or intestine and Mr. Walsham's case illustrates this point very clearly. With regard to the use of morphia in abdominal operations we think it impossible to lay down hard and fast rules. There is at present a disinclination to employ it, but a reaction in the opposite direction is by no means unlikely. If only sufficient morphia is administered to allay the irritation and to calm the patient and not enough to produce troublesome constipation or to hide dangerous complications then in our opinion the morphia will do nothing but good. For the notes of the case we are indebted to Dr. Gilbert Smith, house surgeon, and Mr. Hulton, dresser.

A boy, thirteen years of age, was admitted into the surgery ward of St. Bartholomew's Hospital under the care of Mr. Walsham on June 16th, 1898, at 8.40 P.M. He had just been knocked down by an empty four-wheeled post-office van, a wheel of which had apparently passed across the upper part of the abdomen. On admission the patient was pale and collapsed; the pulse was 78, small, and feeble, and the temperature was normal. The abdomen was slightly retracted but moved feebly on respiration and was not hard or very tender on palpation. There was a mark across the abdomen just above the umbilicus such as might have been produced by the passage of a wheel. The liver dulness was not lost and it was thought that there was some slight dulness in the left flank. The lad complained of severe pain in the back and there was some bruising over the spine at a

[1] THE LANCET, Dec. 10th, 1898, p. 1542.

spot corresponding to the mark of the wheel in front. At 11 P.M. he vomited twice; the vomit consisted of the contents of the stomach but did not contain any blood. Immediately after the vomiting the abdomen became markedly contracted, hard, and board-like and ceased to move on respiration. The pain was now very intense and was referred to the back of the abdomen. The liver dulness was still present and there was no evidence of free gas in the peritoneum. The urine was drawn off and was found to be normal. The pulse had now risen to 100 but was of fair volume and the temperature was normal.

The patient was at once taken into the theatre and the abdomen after thorough cleansing was opened by a vertical four-inch incision through the umbilicus in the middle line. Some blood-stained fluid and a little free gas escaped and the small intestine which presented in the wound was found to be bruised in several places. After a very brief search a coil of small intestine, probably the ileum, was discovered torn transversely across for about two-thirds of its diameter, but the mesenteric attachment was not involved. The edges of the wound were clean-cut and very little if at all bruised. From each end of the partially divided gut a small mass of soft fæcal matter was seen protruding but very little if any had actually escaped into the peritoneal cavity. The ruptured coil was drawn out through the external wound with great gentleness, so as not to squeeze any of the protruding solid fæces from the torn ends. The wound was then well packed with hot sponges, the fæcal matter was removed from the torn ends, the injured coil was thoroughly disinfected both inside and out with perchloride of mercury lotion (1 in 2000), and the rent was united by a double row of fine silk sutures, the mucous membrane being brought together by 5 interrupted sutures and the peritoneum by 12 Lembert sutures. The peritoneal cavity at the seat of the rupture was well flushed with hot water till the fluid returned clear, but a general flushing of the cavity was avoided. The coil of united intestine was now returned and the parietal wound was closed in the usual way without a drain by 8 fishing-gut sutures.

No shock followed the operation which was rapidly completed without any difficulty, the pulse being 96 and of good volume and the temperature normal. There was no vomiting. At 2 A.M. a subcutaneous injection of morphia (1 minim) was administered as the patient was very restless, after which he slept for four hours. At 9.30 A.M. on June 17th the pulse was 130 and the temperature was 101·2° F. There was neither abdominal pain nor distension. During the course of the day the patient vomited and complained of slight pain in both iliac regions. His urine had to be drawn off. On the 18th there was some pain as well as distension; he vomited twice and passed flatus. The pulse ranged from 100 to 120, and the temperature varied from 99·4° to 100°. On the 19th he complained of a good deal of pain. The distension had rather increased. The pulse ranged from 96 to 100 and the temperature from 98·8° to 99°. He retched a little early in the morning. The administration of a soap enema brought about a slight result. On the 20th the patient was fairly comfortable; the pulse was 96 and the temperature was 99°. There was some abdominal pain; he vomited once during the day. The rectum was cleared out. On the 21st he vomited frequently until noon; he was given half an ounce of castor oil with 12 minims of tincture of opium, after which the bowels were opened four times and the abdominal pain ceased. On the 22nd the patient was removed to Harley Ward and from this time he improved steadily, presenting nothing noteworthy. On the 28th the wound was dressed. The scar was found to be dry and quite healthy. All the sutures were removed. In July the patient was discharged from the hospital in the best of health. His bowels acted regularly, his appetite was good, and he had no pain or abdominal discomfort of any kind.

Remarks by Mr. WALSHAM.—Abdominal injuries, especially when there is no external wound, are always of much interest since few cases present more difficulty in arriving at a correct diagnosis and in no case is a correct and early diagnosis of more paramount importance. The present case well illustrates the axiom laid down by the late Mr. Greig Smith of the value of watching an abdominal case till an approximate guess, at any rate, can be made as to the nature of the affection. When I was first called to the patient—the fear of injury to the bladder, liver, or spleen being absent from my mind—I came to the conclusion that he was probably merely suffering from abdominal shock, a condition so frequently met with in hospital practice, or possibly from a rupture of the intestine, but I was determined to remain at the hospital and see him from time to time till a more definite diagnosis could be arrived at. I had not long to wait. He soon began to vomit and immediately afterwards the abdomen, which had hitherto moved, though feebly, and was not hard or particularly tender on palpation, became rigid and board-like, markedly retracted, and ceased to move on respiration. The pain became intense and the pulse rose to 100. I now ventured to diagnose ruptured intestine and at once proceeded to explore. The successful issue, I think, is to be attributed in great part to the early surgical interference, for practically no fæcal extravasation had yet occurred. After completion of the suture of the intestine, therefore, no general flushing out of the peritoneal cavity was required, and consequently there was little handling of the coils of intestine and absolutely no shock. For the first forty-eight hours the patient was fed entirely by the rectum but had teaspoonfuls of warm water by the mouth from time to time. Until June 21st he was kept under the influence of morphia; on this day the bowels were opened by a dose of castor oil which was never repeated. When he retched or felt sick, as he always seemed to do in coming out of the influence of the drug, another subcutaneous injection was given; the pulse-rate was always markedly decreased after each injection. I cannot help thinking, contrary to the fashionable doctrine of the day as regards the administration of opium in abdominal cases, that cautiously and judiciously used it is of great value.

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

A CASE OF EXCISION OF THE SPLEEN FOR INJURY; RECOVERY.

(Under the care of Mr. RUTHERFORD MORISON.)

THE operation of removal of the spleen is remarkable for the great diversity in the results obtained according to the cause for which the operation is performed. In most cases so far as the operation itself is concerned the difficulties are by no means great, and the differences in the mortalities must be wholly attributable to the cause requiring the operation. In leucocythæmia removal of the spleen has been recorded 25 times,[1] and of these cases only 1 recovered; doubtless many other instances of a fatal result after the operation for this condition have never been published. With such a result splenectomy for leucocythæmia is practically unjustifiable. A very different death-rate exists after excision of the spleen for trauma. Even in pre-antiseptic days it happened several times that an abdominal wound permitted the extrusion of the spleen and a ligature having been tied round its pedicle the spleen was removed; and these cases recovered. Since surgeons have been able to open the abdomen without fear of sepsis it has been found that removal of a ruptured spleen can be effected with a surprisingly low mortality and no better example of this operation could be given than that reported below. The evidence of fluid in the peritoneal cavity was very distinct and the diagnosis was practically certain before the abdomen was opened. For conditions other than leucocythæmia and trauma the statistics of splenectomy vary greatly, but a steady diminution in the death-rate is very noticeable. Spanton gives the mortality from 1865 to 1875 at 80 per cent.; from 1876 to 1885 it was 45 per cent.; and from 1886 to 1895 it was 20·68 per cent.[2] For the notes of the case we are indebted to Dr. Grant Arnott.

The patient, a youth, aged sixteen years, was admitted to the Royal Infirmary, Newcastle-upon-Tyne, on August 7th, 1898. Whilst riding down a steep hill on the front seat of a tandem bicycle he ran against the wall of a cottage. He was thrown off the bicycle, crushing his abdomen against the handlebar. When he was picked up he was quite unconscious and blood was streaming from his nose. The accident occurred at 11 A.M. on the day of admission. The patient when he was admitted to the infirmary at 10 P.M. was collapsed, pale, and unconscious, but appeared to be in pain. There was a subconjunctival hæmorrhage of the left eye over the external rectus and also a contusion over the left temple. There was no bruise on the

[1] Brit. Med. Jour., Nov. 2nd, 1895. [2] Loc. cit.

abdomen. The abdomen was slightly distended and breathing was entirely thoracic. The patient lay with his legs drawn up. His abdomen was tender on pressure and the abdominal muscles were rigid. There was dulness in both flanks as he lay on his back and the upper flank cleared when he was turned on to his side, whilst the dependent flank showed an increased dull area. He had vomited a small quantity of greenish fluid several times. The liver dulness was normal. There were no fractured ribs. A catheter was passed and a few ounces of normal urine were drawn off. The temperature was 98° F. and the pulse was 140. On the following morning the patient was improved in condition. His pulse was slower and his temperature was normal. The dulness in the flanks had, however, increased and he was very restless. A diagnosis of intra-abdominal hæmorrhage was made and immediate operation was decided upon.

The abdomen was opened by a median incision below the umbilicus and a large quantity of blood welled out. The intestines and mesentery were examined and were found to be uninjured. The incision was then prolonged up to the ensiform cartilage and the spleen was found to be enlarged, much torn, and bleeding freely. The splenic vessels were

FIG. 1.

Showing the inner surface of the excised organ.

isolated and ligatured with catgut and the whole organ was removed. The abdomen was then washed out with saline solution and large quantities of fluid and clotted blood were washed out. As a portion of the tail of the pancreas was damaged a drainage-tube was inserted in the left loin through a stab puncture. The patient was transfused with 50 oz. of normal saline and did not appear to be much the worse for the operation. The abdomen was closed with silk sutures.

From the third to the eighth day after the operation the temperature varied from 100° to 104·6°. For the first three days the patient was delirious, apparently in consequence of the injury to the head. On August 12th, four days after the operation, the glands of the groin, axillæ, and neck were found to be enlarged and tender. There was no pain in the long bones as has been noticed in other cases. The patient, however, complained for some days of attacks of pain in the epigastrium. On the 15th a red rash like that of scarlet fever was observed on his abdomen and thighs; the rash faded on the following day. There was no sore-throat or sign of scarlet fever. The patient quickly became emaciated and complained of great thirst, but not specially of feeling hungry. The skin later became very dry and desquamated freely. In spite of his high temperature and cerebral disturbance he never appeared to be dangerously ill. The wound healed by first intention. He left the infirmary at the end of the fifth week feeling quite well. At the time of the accident his weight was 6 st. 7 lb. and

FIG. 2.

Showing the outer surface of the excised organ.

on his departure he weighed 6 st. 4 lb., having regained all but 3 lb. The glands in the groin, axillæ, and neck had returned to their normal size.

Examination of the blood.—The blood was examined on August 16th and was found to contain 3,500,000 red corpuscles per cubic millimetre. There were 8 white cells to 700 red. A specimen stained with methyl blue and eosin showed the white corpuscles to be of the following varieties: lymphocytes, 52 per cent.; multipartite, 42 per cent.; and eosinophile, 6 per cent. The hæmoglobin was 50 per cent. of the normal amount. On August 26th the hæmoglobin was 70 per cent. of the normal amount.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Primary Carcinoma of the Liver.—Apparent Thickening of the Subcutaneous Veins.—Intussusception.—Congenital Limb Deficiency and Redundancy.

A MEETING of this society was held on Jan. 3rd, 1899, Dr. PAYNE (the President) being in the chair.

The PRESIDENT referred to the loss the society had sustained in the death of Professor Kanthack who (although young) had contributed papers of great value to the society. A letter of sympathy was sent to his widow.

Dr. C. D. GREEN showed a specimen of Carcinoma of the Liver which he believed to have been primary. The patient was a woman, aged fifty-four years, who had died after several months' illness. The greater part of the organ was destroyed by malignant disease which formed a hard fibrous mass in the centre of the right lobe from which extension had taken place by the development of secondary outgrowths which had coalesced near the growth, but the more distant nodules had remained discrete. The growth was a carcinoma, the cells being polygonal, much variety of arrangement being shown in different parts, and Dr. Green thought that the disease had originated from a morbid activity of the

liver cells themselves. The glands in the portal fissure were affected, but no other growths were found.—Dr. PARKES WEBER asked if the infiltration in the portal fissure might not have been inflammatory as in most cases of chronic biliary obstruction and after ligature of the bile-ducts in dogs.—Dr. GREEN, in reply, said he thought the infiltration was malignant. Obstruction to the flow of bile was not a marked feature in his case.

Dr. F. PARKES WEBER read a paper on an Apparent Thickening of the Subcutaneous Veins. He said that if the superficial veins, especially the internal saphenous veins, were examined in a number of rather cachetic men the vessel walls in some cases felt as if they were thickened, and occasionally the veins could be rolled about under the finger like thin solid cords. This apparent thickening, as far as could be judged from post-mortem examinations, seemed to be due to a contracted condition in the veins especially if the longitudinal bundles of unstriped muscle fibres, which constituted the inner portion of the tunica media, happened to be well developed. The relative amount of this longitudinal muscle probably differed much in different individuals. In transverse sections this inner portion of the vessel-wall was seen collected into ridges and projecting into the lumen, as if squeezed together by the circular muscle fibres which formed the main portion of the tunica media. When the vein had been kept artificially distended during the hardening process this appearance of the sections was not found. The reasons why an apparent thickening of veins was clinically noticeable in men about thirty years of age suffering from some wasting disease were probably the following: (1) the active muscular employment of a working man gave rise before the age of thirty years to full development of the unstriped muscle in the walls of the superficial veins of the limbs; (2) the compulsory rest in hospital, diminishing the circulation of blood through the limbs, caused some of the superficial veins to be comparatively empty and contracted; and (3) the wasting of subcutaneous fat consequent on disease allowed the superficial veins to be more easily felt and rolled about under the finger.—Mr. W. H. BENNETT said that he had been familiar with this apparent thickening of superficial veins for some years without being able to explain it. He had regarded it as physiological and in some way due to excessive function. He mentioned that he had seen it frequently in young women in whom there was some menstrual trouble, the thickening disappearing after the period was over. There appeared to be two varieties—one transitory, in which the vein was tender and felt like the vas deferens but relaxed and became softer on the application of a hot sponge; and the other more permanent, the veins afterwards becoming dilated and varicose. The veins about the ankle were also sometimes affected in some cases of hæmorrhoids, pain in the foot alternating with the hæmorrhoidal trouble. He mentioned one case in which after successful operation for hæmorrhoids there was permanent tenderness and thickening along the lower part of the internal saphena.

Mr. D'ARCY POWER brought forward two cases of Intussusception to show how death might result from the two opposite conditions of absolute irreducibility and of too easy reducibility. He had operated upon the patients on two successive evenings. The first case occurred in a girl, aged five months, who had been seized with sudden pain in her abdomen two days before the operation. Laparotomy was performed after unsuccessful irrigation of the bowel with hot saline solution, but though the intussusception was exposed it was found to be quite irreducible and the child died on the following day, an enterostomy having relieved the more urgent symptoms. Subsequent examination of the tumour showed that the intussusception was extremely complex. The primary invagination was ileo-cæcal and of the ordinary descending type, the apex of the invagination consisting of the congested and thickened ileo-cæcal valve with the openings of the ileum and vermiform appendix. This primary invagination was enveloped in a second intussusception passing in the reverse direction—that is to say, it was of the retrograde variety, whilst the retrograde intussusception was itself complicated by a third intussusception also retrograde. The primary intussusception and the first retrograde intussusception had occurred during life, for their apposed surfaces were glued together by inflammatory exudation. The third invagination which was much smaller was post mortem in origin. Two lymphatic glands were carried down in the first intussusception and both were inflamed. Mr. Power maintained that the recognition of such a form of intussusception was of practical importance, first because it was not very uncommon, and secondly because it was very fatal. Distension of the colon by irrigation had no tendency to relieve such an invagination, indeed it rather made it worse, whilst after the abdomen had been opened the quantity of intestine involved made it impossible in a young child to bring the tumour to the surface. Any attempt to reduce the intussusception by pressing upon the apex defeated its object by increasing the size of the retrograde invagination. The second specimen was as simple as the previous one was complex. The patient was a boy, aged six months, who was said to have fainted two days before he was admitted to the hospital. He presented many of the symptoms of intussusception, but no tumour could be felt until the patient was anæsthetised. The abdomen was opened after an unsuccessful attempt to reduce the invagination by irrigation. The intussusception reduced itself spontaneously as soon as the apex of the tumour was touched and the wound being sewn up and dressed the patient was put to bed. Twenty-four hours later the child died and an ordinary ileo-colic intussusception was found at the post-mortem examination. The invagination had therefore recurred as easily as it had been reduced.

Mr. D'ARCY POWER also showed, for Dr. R. H. LUCY of Plymouth, a very interesting specimen of Enteric Intussusception similar in some respects to his first specimen. It was taken from a girl, aged thirteen years, who was seized four days before her death with a violent pain in the right iliac region. Dr. Lucy performed an abdominal section and opened the bowel above the seat of obstruction. The patient died six hours later and at the post-mortem examination a distended coil of intestine was found situated 4 ft. from the ileo-cæcal valve. The distended coil contained an intussusception and on slitting open the intussusception 3 ft. of collapsed and slaty-blue ileum were found packed away and adherent between the entering and returning layers. The ileum ended in the intussusceptum proper.

Mr. RICHARD BARWELL exhibited photographs and skiagrams from a case of Congenital Limb Deficiency and Redundancy. The skiagrams were made by Mr. Mackenzie Davidson by his stereoscopic method and showed in great relief the bony defects. Mr. Davidson exhibited these with his mirror-stereoscope and gave demonstrations of his method and its value. The patient was a girl, sixteen years of age; she was not mentally deficient and with her deformed hands sewed remarkably well. The right forearm and hand were absent, being merely represented at the end of the humerus by a somewhat square fleshy cushion bearing at each of the distal corners a minute finger-tip with a nail bed. By x rays this cushion was found to contain only a small misshapen piece of the ulna and a nondescript curved strip of bone. The right lower limb possessed no thigh, the buttock seemed slightly elongated forwards rather than downwards, merging into a very slightly narrower part in which the upper end of the tibia could be felt. The limb, therefore, was short by nearly the length of the thigh. In standing her right foot was very little below the level of the other knee. Stereo-skiagraphy showed the pelvis to be perfect, or nearly so; the acetabulum contained probably a femoral head and about an inch of the neck. Also lying on the upper end of the tibia was a small part of the condyloid end of the thigh-bone. Mr. Barwell reminded the society that many years ago he had controverted the then prevalent opinion that these truncations were mostly due to intra-uterine amputation, but he held that they resulted from a defect in development. During fœtal life the foundation of every limb bone was laid down as a cell or a cluster of cells before each particular area of the limb bud had quitted the Wolffian ridge. In any part that had so sprouted forth no further foundations of bone were deposited. In cases of truncation a cause hereafter alluded to produced just at the first appearance of the upper right limb bud a cessation of formative activity which continued until that period of gestation when the humerus would begin to appear. Then in growing it pressed the more distal limb segments out of the ridge and away from the area of depositary work. Meanwhile in the right lower limb development had taken the normal course until formative action re-commenced in the upper, that is until the foot and tibia had budded out of the ridge; it then ceased, hence the shaft of the femur was absent. Mr. Barwell thought that there was between the third and fourth week of

gestation a defect in a certain limited area of the central nervous system, which defect gradually travelled down the cord so as to influence in succession the upper and lower limbs. It had been the belief of embryologists that the bones as well as the muscles of limbs were developed under the sway of motor-nervous influence. This left hand would suggest as to the former a different conclusion, as the deformity corresponded with the distribution not of the motor but of the sensory part of the ulnar nerve.—Mr. SHATTOCK disagreed with Mr. Barwell's view that the nervous system played a part in the production of these deformities. Such arrests and fusions were quite common in the vegetable kingdom where the influence of the nervous system could not be invoked. He would ascribe them to imperfect cell division at a very early period of the life of the ovum.—Mr. BARWELL, in reply, said that it was not fair to argue that because phenomena occurred in plants without the influence of a nervous system that that system was not responsible for similar phenomena in animals. Reflex contraction, for instance, could be witnessed in sensitive plants and yet in man such contractions were certainly due to nervous action.

The following card specimen was shown :—

Mr. P. DE SANTI: Endosteal Sarcoma of the Os Calcis.

SOCIETY OF ANÆSTHETISTS.

The Choice of an Anæsthetic.

A MEETING of this society was held on Dec. 16th, the President, Dr. DUDLEY BUXTON, being in the chair.

Mr. E. F. WHITE opened a discussion on the Choice of an Anæsthetic. Nitrous oxide he placed first as being the safest and regarded ether as coming next, the death-rate under the last being 1 in 16,000 and that under chloroform 1 in 3000. Amongst healthy individuals ether was practically without risk, but chloroform often proved fatal. Upon etherised patients reflex shock due to the operation did not appear. This, however, was not the case when chloroform was used. Prolonged operations under an anæsthetic were deprecated as prolonged anæsthesia increased shock. Ether given antecedently to chloroform removed some dangers. The A.C.E. mixture was not, he thought, a reliable one. In reference to age, while children and the aged took chloroform better than the adult children frequently succumbed. Ether was well borne by children when properly administered. Mr. White had successfully etherised a child a few weeks old. He used in many cases chloroform followed by ether for children. Advanced age independently of organic lung disease he regarded as no insuperable objection to ether; in such cases he gave little ether and gave it slowly. In chronic lung conditions he used ether if possible, as chloroform he believed caused as much trouble as ether. In acute lung trouble chloroform should be used. In cardiac affections he selected ether save for aneurysms. In abdominal surgery he selected ether and insisted upon light anæsthesia. Chloroform with or without morphine was selected for brain surgery, also in ophthalmic practice. For operations about the mouth Mr. White commenced with gas and ether to stimulate and alleviate shock and went on with chloroform, and this procedure he selected for post-nasal adenoid growths. Chloroform, which he formerly gave in thyroidectomy, he now replaced by ether.

Mr. EDMUND OWEN, while entertaining a personal liking for chloroform, was keenly alive to its dangers. He found that the least experienced gave anæsthetics without the slightest hesitation. He regarded the discussion as so important that he urged the society to make a definite pronouncement which might guide practitioners in general. The A.C.E. mixture he thought dangerous and speaking of children he was convinced that cocaine was an extremely dangerous drug. Mr. Owen drew attention to the operations of staphylorraphy, tonsillotomy, and removal of glands from the neck as being particularly dangerous ones in children from the point of view of the anæsthetist, as children died often from shock after them and from the danger of reflex heart failure.

Mr. A. E. BARKER had for some time past felt that chloroform was a better anæsthetic for prolonged operations and especially for abdominal ones. One of the dangers of surgery was the surgeon himself, and whatever anæsthetic made it easier for surgical manipulation gave the patient the best chance from the surgeon's point of view. He believed that a more general adoption of cocaine as an anæsthetic in major surgery would come about.

Mr. HERBERT ALLINGHAM regarded ether as undoubtedly the safer anæsthetic, especially in rectal surgery, when very profound anæsthesia was required and the danger of reflex shock was the greatest. For abdominal sections chloroform was, from the surgeon's point of view, more comfortable, but for rectal operations it was a most dangerous drug.

MRS. SCHARLIEB had found that ether when properly given fulfilled all the requirements of an anæsthetic and gave an uninterrupted and quiet anæsthesia.

Mr. TYRRELL submitted that many cases of "ether blueness" were due not to ether but to an imperfect oxygen supply. In cases needing stimulation after chloroform depression Mr. Tyrrell had found his double bottle method of value.

Dr. SILK dwelt upon the importance in the choice of the anæsthetic of the following factors—special knowledge and skill of the administrator, duration of the operation, and posture of the patient. For very young children he selected chloroform; from three to twelve years of age he preferred the A.C.E. mixture; from twelve to sixty years of age he gave ether; and over sixty years of age he gave A.C.E. mixture or chloroform. For the fat and plethoric he liked A.C.E. mixture and in acute lung trouble he relied on chloroform; when the lung trouble was not acute he began with A.C.E. mixture and subsequently increased the proportion of ether; uncompensated heart disease and atheromatous arteries he considered contra-indicated giving ether. Renal disease again in his mind suggested the use of A.C.E. mixture, as did operations upon the head and neck. In abdominal operations those involving great shock required ether. Many complaints made about ether in abdominal cases were possibly due in fact to the difficulties incident to the operation rather than the anæsthetic. He, however, felt that in such operations everything should be done as far as possible to avoid inconveniencing the operator.

The PRESIDENT mentioned that he had received a considerable number of letters from surgeons and physicians interested in the discussion.

At the motion of Mr. H. DAVIS, seconded by Dr. A. H. COOK, the discussion was adjourned to Jan. 20th.

MANCHESTER THERAPEUTICAL SOCIETY.

Action and Uses of the Various Kinds of Aloes.—Treatment of Hæmatemesis.

A MEETING of this society was held at the Owens College, Manchester, on Dec. 20th, 1898, Dr. LEECH, the President, being in the chair.

The PRESIDENT made a communication on the Action and Uses of the Various Kinds of Aloes and appealed to the members of the society to aid in the investigation of the relative value of the different kinds of aloes.

Professor DRESCHFELD opened a discussion on the Treatment of Hæmatemesis. Hæmatemesis was only a symptom; the cause might be extra-gastric or intra-gastric. Extra-gastric causes such as hæmorrhage from the upper respiratory tract or from dilated œsophageal veins or from duodenal ulcer might give rise to hæmatemesis. Hæmatemesis of intra-gastric origin might occur from various causes. 1. Trauma. (*a*) Immediate hæmatemesis might occur as a result of injuries and might be profuse or slight. Such cases often got well with rest and milk diet. Gallic acid and other styptics might be used but were not usually necessary. (*b*) Remote hæmatemesis might occur a few days after the injury and it was thought by some to be due to hæmorrhagic erosion of a vessel. It might recur and often led to gastric ulcer; the treatment was similar to that for gastric ulcer. 2. Hæmatemesis due to arterial hæmorrhage. (*a*) Hæmorrhage due to gastric ulcer. In these cases it was best to avoid giving food at all by the mouth and even the ingestion of fluids was inadvisable. Even drugs by the mouth were better omitted, with the exception of turpentine, which Professor Dreschfeld believed to be of decided benefit. It might be given in 10 minim doses three times a

day in capsules or in emulsion with white of egg. Ergotin injections did no harm and might do good. Subcutaneous transfusion of salt solution might be beneficial, but Professor Dreschfeld had found it difficult to administer in this way more than half a pint. Operative interference had been tried, the bleeding artery being tied, but this was only justifiable as a last resource. (*b*) Hæmorrhage due to toxic gastritis might be treated by giving appropriate antidotes. (*c*) Hæmorrhage in acute and chronic gastritis occasionally occurred but rarely required treatment. (*d*) Hæmorrhage in cancer was rarely so free as in ulcer in the stomach. Bismuth might be useful to check the bleeding; gallic acid, tannic acid, and turpentine might be used. (*e*) Hæmorrhage from persistent vomiting rarely required treatment. 3. Venous hæmorrhage might be due to obstruction of the portal circulation, congestion of the systemic veins (heart disease), or to disease of the spleen. Hæmatemesis from portal obstruction, as in cirrhosis of the liver, might be great in amount and the blood venous in character; there was not so much collapse as after severe arterial hæmorrhage. In treatment no food should be taken except by the rectum. Calomel was very useful; magnesium sulphate had also been given. It was a question whether digitalis might not be useful. Hæmatemesis in chronic venous congestion from heart disease required similar treatment. Hæmatemesis from splenic conditions might be sometimes due partly to alterations in the blood, but sometimes occurred in splenic enlargement as in malaria. In Hodgkin's disease it was probably due rather to alteration in the blood than to venous congestion of the spleen. 4. Hæmatemesis due to alterations in the blood might occur in leucocythæmia, jaundice, pernicious anæmia, purpura, hæmophilia, scurvy, &c. Calcium chloride might often be recommended in cases of purpura and arsenic in pernicious anæmia; turpentine was often useful. 5. Hæmatemesis due to nervous causes might arise in epilepsy, cerebral tumour, hysteria, &c. In the last-named it might be due to artifices and not come from the stomach, but true hæmatemesis was sometimes found. In such cases gastric ulcer might be a possible concomitant. In hysterical cases there was not so much collapse and anæmia. 6. Vicarious menstruation as a cause of hæmatemesis was rare but it might occur. 7. Hæmatemesis of the newly-born was usually slight. Melæna must always be looked for as well. Hæmorrhage from other mucous membranes was frequently associated with it; occasionally gastric ulcer had been found. —Professor DIXON MANN recommended physiological rest in treatment of hæmatemesis due to gastric ulcer. The most useful drugs were morphia and turpentine. He had seen profuse hæmorrhage in cases of enlarged spleen with no trace post mortem of any erosion of the vessels of the stomach.—Dr. WILD pointed out that in cancer of the stomach hæmatemesis was not so frequent as books would lead one to expect. Ergotin and morphia hypodermically or opium and ergot by the mouth were useful in these cases. If severe it was best to give nothing by the mouth.—The PRESIDENT remarked on the infrequency of death from hæmatemesis. He had seen one in a case of enlarged spleen.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Dec. 20th, 1898, Dr. A. Hill Griffith, President, being in the chair.—Dr. Lloyd Roberts described a case of Elephantiasis of the Vulva. The patient was a married woman, aged thirty-one years, who had menstruated regularly and who had never been pregnant. Twelve months previously the enlargement had commenced and had progressed steadily. When the patient was first seen a large pendulous mass of about the size of a child's head had been found growing from the labia minora. The mass had been removed under an anæsthetic and the patient had made a good recovery. There was no history of venereal disease. Microscopic examination had shown that almost the whole mass was composed of fibrous tissue. The epithelium was thickened in places and the blood-vessels which were few in number showed evidence of endarteritis. These growths were usually caused by the irritation of venereal discharges or by traumatism. Their seat of origin was most frequently the clitoris, sometimes the labia minora or labia majora. In some cases great enlargement of the growth had been noticed during pregnancy, with return to the former size after delivery. Increase in size had also been noted during menstruation. Excision was the only treatment which was of any avail.—Dr. J. W. Smith showed a man, aged fifty-eight years, on whom he had performed suprapubic prostatectomy in July last. Symptoms of hypertrophy had existed for four years with severe cystitis and urethritis for several months previously to operation. Daily washing of the bladder for three months had given no relief and the patient was sinking rapidly from toxæmia. A conical middle lobe projecting for more than 1 in. into the bladder behind the meatus had been removed piecemeal with forceps. A tube retained in the suprapubic incision for two months had been removed when the urine became normal and natural urination re-commenced. The patient had gained 25 lb. in weight since the operation, could retain the urine for from eight to ten hours, and micturition was prompt and forcible.—Dr. E. S. Reynolds showed a large series of Lantern Slides illustrating cases of Mental and Nervous Disease.

NEWPORT MEDICAL SOCIETY.—A meeting of this society was held on Dec. 7th, 1898, the President, Mr. H. E. Williams, being in the chair.—Dr. Garrod Thomas read notes of a case of Aneurysm of the Descending Aorta and showed Specimens.—Mr. C. Brooke Gratte showed (1) a case of Leucoderma; and (2) Nævus of the Tongue.—Mr. P. H. Hacquoil showed a case of Spinal Irritation after Injury.—Mr. C. S. Vines exhibited a case of Muscular Atrophy following accident.—Dr. R. J. Paton showed a case of Paralysis of the Leg after accident.—Dr. Rowland Thurnam of Bristol read a paper on the Open-air Treatment of Phthisis, describing especially the course followed by Dr. Walther at Nordrach Sanatorium. The paper was of special interest and Dr. Thurnam was heartily thanked for the same.

Reviews and Notices of Books.

Life and Letters of Edward Thring, Headmaster of Uppingham School. By GEORGE R. PARKIN, C.M.G., Principal of Upper Canada College. Two Volumes. London: Macmillan and Co., Limited. 1898. Price 17*s.*

THIS highly interesting book tells through the medium of his own diaries and letters the life-work of a man who was, as Mr. Parkin claims for him, unquestionably the most original and striking figure in the schoolmaster world of his time in England or elsewhere. Thring was the son of a Somersetshire rector, a Winchester man who was also a squire of ancient family, by his wife, the daughter of a gentleman who was at the same time Dean of Wells and Master of Balliol, so that he may be said to have been born in an atmosphere of Conservatism, special privileges, and pluralities. He was educated in the same atmosphere at Eton, where he was captain of the school, and at King's College, Cambridge, where he graduated after winning the Porson without university examination but with the reputation of being the best, or second best, classic of his year. Thring should therefore under the influences of early environment have been a learned upholder of things as they were, seeing how comfortable they had been made for him and his—an aristocratic-minded man doing his duty on *noblesse oblige* principles rather than in obedience to any high inner call, while some subserviency to custom and prejudice might have been expected of him. Yet never did a man start more definitely on a life of his very own than did Thring—a life at variance with everything that might have been expected of him remembering his birth and training, a life wherein a custom was only honoured after strict investigation into its utility and wherein no prejudice was allowed to work if its only claim was its age. Not that Thring was without prejudices; he had many. From earliest childhood he manifested marked individuality, which is only saying in other words that he knew what he loved and what he hated; but all his prejudices were against the things that he considered dishonest or dead.

After leaving college he was ordained and then held a country curacy for a brief time, but while still quite a young man he took charge of the fortunes of Uppingham School. Uppingham was at that time a small grammar-school.

Thring at once proceeded to construct it on lines laid down absolutely by himself into a public school of the first rank. He had loyal lieutenants and cordial coöperation, but the schemes by which the transformation was secured in less than twenty years were all his own. He put his conception of what a great public school ought to be into practical working and, being a real designer and not a faddist, his work was recognised from the first as living and important. In class-work he was conservative enough to desire to retain the subjects as the basis of the English lad's education which had always formed the usual curriculum, but in methods he was revolutionary to a degree, holding largely that what was taught mattered little—the great thing being how it was taught, how it was received, and what sort of training the educational process of give-and-receive formed for good work, work that should be alive in the larger world. It was this vitality that he found so absent from the public school education of his day and this is why we find him—an Eton man, and not only an Eton man, but a most affectionate son of his old school — organising the Conference of Headmasters of Public Schools and speaking openly of "breaking-up the seven-school delusion"—i.e., the tradition among boys, and their parents also, that only Eton, Winchester, Westminster, Harrow, the Charterhouse, Shrewsbury, and Rugby were to be considered public schools in the true sense of the words. When the Conferences were started, now some twenty-five years ago, Thring was supported only by the headmasters of Sherborne, Repton, Tunbridge, Liverpool, Felsted, Bury St. Edmunds, and four or five other grammar-schools neither so large nor so ancient in foundation as some of those we enumerate. The absence of the headmasters of the seven schools and of other schools as important daunted more than one of the original acceders to the Conference, but Thring was undismayed. He refused to make concessions to bring in the big schools which had stood aloof from a movement inaugurated in a grammar-school. He said that some of these schools rested on their prestige while he and those with him based their claims as schoolmasters on the vitality of their methods; and he lived to see, and in quite a short time, Eton, Winchester, Harrow, and Shrewsbury offering hospitality to the Conference which certain among them had originally viewed with suspicion.

In 1875 a series of events occurred which tried Thring very highly. Had he not been a man of the most indomitable courage he might have lost all that he had so long worked for.

A case of undoubted typhoid fever occurred in one of the master's houses at the end of a Midsummer term, and in the Michaelmas term, after an explosion of sewer-gas in the unventilated cesspit, there was a development of a fever of the same nature in that house, 27 persons out of 60 being affected. Upon examination it was found that the gases of the cesspit had free access to the studies, and that the well from which the water was supplied was not 50 ft. distant from this cesspit and only 15 ft. from another; whilst the stream supplying the house flowed under a drain connecting two cesspools of the house. Two other houses also suffered, but not to the same extent; but the house nearest to the one first infected suffered most. A few other cases occurred in some of the other school-houses, but these cases could be accounted for by the free intercourse permitted to the scholars of these houses with those infected under the existent rules of the school. The nature of the epidemic did not at first come home to Thring's mind, nor was he prepared to accept as conclusive the diagnosis made by the school medical attendant who recognised early that he had a serious outbreak of typhoid fever to deal with. A less disquieting view was presented to the headmaster who accepted it and, his beliefs jumping with his hopes, the evil was undoubtedly minimised at first. We remarked in THE LANCET, where much correspondence took place on different questions arising out of the outbreak of typhoid fever at Uppingham School, as follows:—

"It is much to be regretted the school authorities allowed any doubt to be thrown on the opinion of the school medical attendant as to the nature of this disease. In consequence of this error much valuable time was lost at the outset when prompt measures alone could check the onward progress of the disease. Mr. Bell's diagnosis was perfectly correct and ought to have been received as conclusive. If the masters were in doubt they ought to have appealed to the sanitary authority of the district who would have at once assumed the responsibility of deciding the question and taking the necessary steps to prevent the extension of the disease. By delaying to do so till the last moment and till thirty cases had been attacked the school authorities assumed a grave responsibility. It is not assuring to find that an infectious fever may arise and extend in one of our large public schools, and that the true facts may be, if not withheld, certainly not communicated to the parents, and also to find little or nothing attempted in the way of preventive measures. Sad as the lesson taught by this outbreak at Uppingham is it will not be without value if it teaches school authorities the necessity of trusting less to their own omniscience and more to the guidance of those who by special training are best qualified to give advice and act in such emergencies."

On reading Thring's diaries, although we do not propose to take back now a word of our rather severe criticism, we desire to record how profoundly impressed he was with the reality of his responsibilities and by what heart-searchings his every act was prompted. If at first his behaviour in the face of the epidemic was imprudent his imprudence was an expression of his great courage and of his simple trust in God. And when he saw what he had to deal with, when, in fact, some technical knowledge of the etiology of typhoid fever had been gained, his action on behalf of the school which he had re-created and of the boys who had been entrusted to him showed a quality of resourceful wisdom that might have been expected rather of a general than a schoolmaster. In a few days Thring hired a Welsh fishing village. He took the hotel as the school head-quarters, furnished all the lodging-houses and most of the cottages as dormitories and studies, transported all the school fittings to the new home, borrowed cricket and foot-ball grounds, built a temporary school-room, and opened Uppingham School some two hundred and fifty miles from the town of Uppingham with every detail of school organisation absolutely complete and with a full complement of boys.

We have given much space for a medical paper to the consideration of the life of a schoolmaster, but, in the first place, a career that is ruled by high principle and dauntless courage in its attempts towards progress is always worthy of the study of the medical reader, whose professional life is so beset with temptations to compromise; and, in the second place, Thring's mobilisation of Uppingham School was a feat of organisation in the teeth of a disastrous epidemic which is well worth the study of all practical men.

Practical Pharmacy: an Account of the Methods of Manufacturing and Dispensing Pharmaceutical Preparations, with a Chapter on the Analysis of Urine. By E. W. LUCAS, F.C.S. London: J. & A. Churchill. 1898. Price 12*s.* 6*d.*

THIS should be an excellent book for the pharmaceutical student. It keeps well within those subjects with which the student is expected to be familiar whilst not burdening him with the details of those processes which can only be conducted on a manufacturing scale. The methods of preparation involved in the production of extracts, tinctures, &c., are clearly described. The meaning

and application of such methods as comminution, extraction, levigation, and elutriation are also fully explained and some excellent illustrations of the requisite apparatus occur on almost every page. In short, the work is of a thoroughly practical character and one which the reader could pick up and employ as a very reliable guide to the methods used in pharmacy for the production of standard preparations. The chapter on animal preparations is not complete and, indeed, only includes pepsin and thyroid. In view of the growing importance of animal extracts in therapeutics we should have expected more exhaustive treatment. Chapters XLI. to XLIX. will be valuable to the student when he comes to practical dispensing. Here again he will find just the information which is immediately useful and instructive. Following these chapters is a section of volumetric analysis as applied to pharmaceutical preparations where possible. As far as we have gone through the processes therein described they are up-to-date. Notes are appended giving the strengths in accordance with pharmacopœial requirements. In regard to the standardisation of potassium permanganate the author might have added that the reaction is only completed when the solution is warmed. The chapter on the Essay of Alkaloidal Extracts is decidedly good and evidently the outcome of personal experience with the processes described. The directions enjoined in regard to manipulation convey this impression. The chapter on Gravimetric Analysis is necessarily short, but in the succeeding chapter we find a useful list of tests for the substances mentioned in the text of the pharmacopœia. It is here again that the author bears in mind that he has written the book primarily for students, since he enters into those explanations of the more important reactions which make practical work intelligible. Useful tables follow, giving formulæ, molecular weights, &c., and further there is a table of the more potent chemical substances with their preparations, strengths, and doses. Next the poisons are classified in accordance with the Pharmacy Act and the list of poisons and their antidotes is appended. The last section is devoted to the analysis of urine because the author believes that in the future pharmacists will be called upon to undertake not only examinations of urine but possibly many other operations of a similar character. Here we join issue with him, for we maintain that analysis is outside the pharmacists' sphere of practice. The medical man is as a rule equal to ascertaining for himself the composition of urine in regard to such important clinical factors as acidity, uric acid, sugar, albumin, and so on, but when he requires assistance in this matter the chemical analyst is clearly the person he should consult. The pharmacist has a wide scope of subjects to deal with in the conduct of his ordinary business which must deny him the experience of an everyday analyst. The book is well got up, the type is clear and bold, and the illustrations are good, the paper upon which they are printed being of a quality which is admirably adapted for the purpose.

Practical Uranalysis and Urinary Diagnosis: a Manual for the use of Physicians, Surgeons, and Students. By CHARLES W. PURDY, M.D., LL.D. Queen's University. Fourth revised edition. Philadelphia, New York, Chicago: The F. A. Davis Co. London: Sampson Low, Marston, & Co. 1898. Price $2.50.

THE first edition of this work was published in 1894 and the fact therefore that since that time a fourth edition has been demanded is the best evidence of its merits. The book is no mere collation of the material that has appeared in literature from time to time, but is rather a record of the author's own practical experience with the processes that have been published at intervals with the view of making the analysis of urine a guide to diagnosis. The book is divided into two parts, the first of which deals with analysis and the second with diagnosis. In the former section the author does not simply detail the analytical operations concerned, but first describes the composition and character of the normal and abnormal constituents and explains the reason of the appearance of certain bodies in varying pathological conditions. Thus the clinical significance of these bodies is discussed before the tests for their presence are described. And on considering these tests we invariably find that the author has taken steps to make them reliable. Indeed, sometimes we find modifications of certain methods which are now associated with the author's name, the phrase "the author's process" occurring again and again. For example, he has suggested an important modification of the method of Dr. Pavy for the estimation of sugar. The test solution in accordance with the directions laid down by Dr. Pavy, though giving a much more definite "end-reaction" than that obtainable with the original Fehling solution, was not stable. This the author remedied by substituting glycerine for the Rochelle salt. We can confirm in our own experience the author's statement that the amount of oxidation of the ammonic cupric solution by the air is so inappreciable as not to interfere with the accuracy of the results. The section on Analysis concludes with chemical and anatomical sediments. This is followed by a section on Gravel and Calculus in which a scheme for the detection of urates, oxalates, phosphates, &c., is given in tabular form. Part II. is purely pathological. It contains some excellent microscopic illustrations of urinary sediments under various pathological conditions. Lastly, the appendices are (1) on the Examination of Urine for Life Insurance, and (2) on the Reagents and Apparatus for Qualitative and Quantitative or, as the author puts it, "Determinate" Analysis. The latter includes a form of report for filling in the particulars of the urine examined. The references to New York firms for apparatus are obviously of little value to students in British hospitals and schools. This does not detract from the value of the work as a guide to the analysis of urine and as a source of reference to the history of the subject up to the present time.

Degeneracy: Its Causes, Signs, and Results. By EUGENE J. TALBOT, M.D., D.D.S. Contemporary Science Series. London: Walter Scott, Limited. 1898. Pp. 372. 120 Illustrations. Price 6s.

THIS work is primarily intended for "educators and parents" and with that purpose is written in a popular style. It contains, however, so much information and evidence of extensive and close study that it will prove of interest and value not only to those for whom it is designed but also to those who wish to increase their knowledge in a limited department of medical biology.

Many subjects are considered by Dr. Talbot which are not to be found in ordinary medical text-books. The chapter on the Stigmata of Degeneracy contains an excellent *résumé* of the investigations which have been made by various observers into a very difficult subject and a table is given summarising in practical form these stigmata.

The conclusions arrived at as regards consanguineous intermarriages are those generally accepted—namely, that if the family be free from degenerate taint marriage among its members in no way diminishes the chances of healthy offspring. Amongst other subjects fully discussed are the degenerate cranium, face, and nose, degeneracy of the lip, palate, eye, and ear, and degenerate teeth and jaw. The illustrations in these chapters are numerous and considerably add to the value of the book.

Some interesting observations will be found in the chapter on Degeneracy of the Body. For instance: "Among the structures of reversionary type that have attracted most

attention of late years is the appendix vermiformis. This ..... is a rudimentary offshoot which is extremely variable. Man retains this structure as a relic of having been at one time a vegetable feeder. ..... The appendix is poorly supplied with blood which predisposes it to attacks by microbes because of the absence of leucocytes to fight these and also because being, so to speak, a blind alley in the intestine microbes find in it a suitable culture medium for them." The author, however, has omitted one of the chief factors in appendicitis—namely, the swelling of the mucous membrane obstructing the outlet of the appendix into the intestine.

Another chapter deals with Degeneracy of Mentality and Morality. This section will well repay perusal for many complex and difficult problems are considered. The character of the neurotic is analysed and the following passage deserves attention: "Neurotics are not met with to any extent among barbarous races, but are numerous in civilised communities, where the weak are preserved from early death and then subjected to the struggle for existence." The present tendency amongst both men and women, young and old, to take more active exercise will no doubt help to strengthen the general organism and so lessen the drift towards neurasthenia which has certainly increased of late years.

There are many other interesting chapters to which we might refer, but we believe that we have said sufficient to indicate the lines upon which the work is written and those readers who wish for further information cannot do better than add the book to their library.

Atlas of Legal Medicine. By Dr. E. VON HOFMANN, Professor of Legal Medicine and Director of the Medico-Legal Institute at Vienna. Edited by F. PETERSON, M.D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; assisted by Dr. A. O. J. KELLY, Instructor in Physical Diagnosis, University of Pennsylvania. London: Rebman Publishing Co. 1898. 56 Plates in Colours and 193 Illustrations in Black. Price 15*s*.

THIS is one of the excellent "Hand-Atlases" translated from the German and notices of other numbers of the series have already appeared in our columns. The present volume maintains the high standard of its predecessors. In the subject of Forensic Medicine illustrations are particularly useful; the student is expected to show some knowledge of this branch of his profession at the examination, but has very few opportunities of obtaining practical acquaintance with the problems with which in his subsequent career he may be brought into contact. By reference to the plates and illustrations contained in this volume, however, he will obtain a very good idea of the appearances which are to be met with in medico-legal practice. The volume, however, cannot replace a text-book on this science although it forms a valuable adjunct.

The plates are most beautifully executed although the subjects from which they were taken are naturally not of a pleasing nature. Their interest is greatly added to by a brief account of the cases from which the drawings were made. We would draw especial attention to the illustrations representing gunshot wounds and injuries inflicted with instruments such as sabres, hatchets, knives, &c.

There are twenty-two coloured plates depicting the conditions produced by various poisons and these will be of particular assistance to the student in learning the post-mortem appearances caused by the principal corrosive and irritant poisons.

LIBRARY TABLE.

Windyhaugh. By GRAHAM TRAVERS (Margaret Todd, M.D. Brux.). London and Edinburgh: Wm. Blackwood and Sons. 1898. Price 6*s*.—This the work of a medical woman treats of the pathology, not of the body, but of the soul. When we are first introduced to Wilhelmina Galbraith, aged seven years, she is enthroned upon a barrel of Jamaica sugar gravely discussing with her faithful friend the grocer whether or no she can ever hope to be "one of the elect" seeing how difficult she finds it "to believe." His answer is ambiguous, counselling a postponement of the problem. Four hundred pages roll over Wilhelmina's head before we are told in somewhat mixed metaphor that she "pegged out a spiritual tent sufficiently roomy for her own free life and expansion." But these four hundred pages are of no common interest. The story moves briskly along through most skilfully varied scenes and from first to last the book is full of clear, incisive touches which make the characters stand out in bold relief before us. Wilhelmina's early youth in the bleak seclusion of Windyhaugh with her prim old Grannie and that crumpled handkerchief we all know so well with landmarks of gore along the track of the laboriously achieved hem; her charming French governess, extracts from whose letters make us wish she too would tell us a story; her selfish Aunt Enid who seems and is a being from another and a very different world;—all these characters are shown us with a vividness of portraiture which makes them convincingly real. The death of the old Grannie, described with circumstances of much eerie power, allows Wilhelmina's horizon to widen out and she meets her father, one of the few scamps of contemporary fiction whose subtle charm is not only insisted on but also conveyed to the reader. There is an admirable scene where the child finds her way to what he has left of heart by an unconscious epigram. "But I've been told that any fool can be clever!" says Wilhelmina, quoting her grocer friend, and here, it must be admitted, she reaches her high-water mark as a conversationalist, for she is more inclined to be earnest or naïve than brilliant. As a result of this delectable father's flirtation with the "smilax woman" we next have Wilhelmina's experiences in a Bayswater boarding house where she carries on a dual struggle; on the other hand, straining every nerve to attain "conversion," and on the other endeavouring to propitiate the justly irritated boarders with timely bunches of violets; and is starved to the point of helping herself and her feckless step-mother to slices of the lodger's turkey. This phase is too painful to be long endured. The "smilax woman" is removed (would it be unkind to say "conveniently"?) by death and the scene shifts once more, this time back to Windy haugh. But to what a different Windyhaugh! There are racehorses and equally fast young men and a charming actress, and, above all, the fascinating father whom we learn to love almost as much as his little daughter does. Her religious exercises fall somewhat into abeyance and when the hero crops up and is described to her in the off-hand language of the horsey man as having "chucked the Church and gone in for literature—honest-doubt business," she is not as much shocked as one would have supposed. We must confess to a scant liking for the weak hero whom the lady novelist is apt to fall back upon when the handsome villain with magnetic eyes is otherwise engaged, but accepted as such Harley Brentwood is distinctly good. Out of sheer weakness he wins his bride—out of sheer weakness he goes near to lose her. It is not our intention to betray the secret of this latter half of the story—it must suffice to say that there is no falling off in the skilful manipulation of exciting incident. There is something pleasantly old-fashioned about the concluding chapter of what is throughout an interesting and wholesome book.

The Medical Register and Directory of the Indian Empire for 1898. By JAMES R. WALLACE, M.D. Brux., F.R.C.S. Irel. Calcutta: Barker Brothers.—The first edition of this directory was published in 1892 and the one now before us is the second. In the interval between the two editions

the Indian Medical Association has sprung into being—an association which will doubtless be of use in welding the medical profession of the Indian Empire into a whole. Besides the lists of medical practitioners including both military and civilian, the Directory contains valuable information as to medical education both in India and at home, various tables of weights and measures, notes upon medical items such as the incubation periods of infectious diseases and the like, the Medical Acts, and an account of the Indian Medical Association. Considering the very trying time through which the Indian Empire has recently been passing owing to wars, plague, and famine, which naturally disorganised the whole community, Dr. Wallace is to be congratulated upon having produced so complete an account of the medical profession in India.

JOURNALS.

Annales de Gynécologie et d'Obstétrique. December, 1898. Paris: G. Steinheil.—This number contains the following articles: Appendicitis and Salpingitis, by M. A. Routier; A Fibro-cystic Tumour of the Neck of the Uterus of Congenital Origin, by MM. Baraban and Vautrin; the Technique of Bacteriological Researches upon the Genital Canal in the Female, by M. J. Hallé; a Communication made to the Congress of Gynæcology at Marseilles, October, 1898, upon the Accidents that may Happen to the Intestine in the course of a Hysterectomy, by MM. Verdelet and Binaud; the conclusion of his article upon the Auto-intoxications of Pregnancy (the first part having appeared in the November number), by Dr. G. Bouffe de Saint-Blaise; a Review of the Various Operations Practised for Stomatoplasty and Uteroplasty, by Dr. H. Delagénière. The proceedings of the Obstetrical and Gynæcological and Anatomical Societies of Paris and the usual Bibliography conclude the number.

Revue de Gynécologie et de Chirurgie Abdominale. No. 6. November-December, 1898. Paris: Masson et Cie.—This number contains articles upon the Differential Diagnosis of Pregnancy, of Ectopic Gestation, and of some Abdominal Tumours, by M. Muret; a Contribution to the Study of Foreign Bodies in the Uterus, by M. Fr. L. Neugebauer; Surprises in Abdominal Surgery, by M. M. J. Galvani; and the usual analysis of current literature of abdominal and pelvic surgery.

DEVONSHIRE GUARDIANS AND THE VACCINATION ACT.—At a meeting of the Newton Abbot Board of Guardians held on Dec. 28th, on the motion of Dr. Leys it was decided by 32 to 4 to join the protest against the conscience clause in the new Vaccination Act and to appeal to the Local Government Board again to make vaccination compulsory.—At a meeting of the Tiverton Board of Guardians held on Dec. 28th it was stated that the old vaccination arrangements had been very satisfactory. During the past twenty-five years, according to the returns of the vaccination officer, only 35 cases were unaccounted for and during that time 3590 children were vaccinated.—At a meeting of the St. Thomas (Exeter) Guardians held on Dec. 30th it was resolved to petition Parliament asking that the Vaccination Act might be repealed, as it was little less than a national calamity.—At a meeting of the Plympton Board of Guardians held on Dec. 30th it was resolved on the motion of Dr. Aldridge to support the resolution of the Honiton guardians petitioning Parliament for the reinstatement of the compulsory clauses of the Vaccination Act and urging that the recent Vaccination Act should be repealed.

MERTHYR TYDVIL GUARDIANS AND VACCINATION.—The public vaccinators of Merthyr Tydvil informed the board of guardians of that town at their meeting on Dec. 24th that they were unable to accept the vaccination fees proposed by the board.

Analytical Records
FROM
THE LANCET LABORATORY.

CARBOLACENE.

(W. AND F. WALKER, AFRICAN HOUSE, WATER-STREET, LIVERPOOL.)

OUR examination shows carbolacene to be a mixture of soft soap and tar acids. It is a pink semi-liquid preparation miscible in all proportions with water and yielding a perfectly clear solution. On the addition of mineral acids the fatty acids of the soap together with the tar acid separate. Carbolacene is free from inert tar oils. In addition to being an efficient disinfectant it is also an excellent detergent. The soap used is potash soap, since on igniting the preparation an ash remains which is carbonate of potassium.

ABROLIS.

(ABROLIS, LTD., 1 AND 2, RANGOON-STREET, CRUTCHED FRIARS, E.C.)

Our analysis of this water does not differ materially from that published by Fresenius. It belongs to the alkaline carbonated class of table waters. The principal constituents are carbonate of soda, 1·91 grammes per litre; common salt, 1·20 grammes per litre. It further contains carbonate of magnesia in the same proportion as the common salt. The water is derived from the Tönnissteiner spring near Brohl on the Rhine. It is pleasantly sparkling with carbonic acid gas which is stated to be natural.

GLYCEROL OF MALT.

(PRICE'S PATENT CANDLE COMPANY, LTD., BELMONT WORKS, BATTERSEA, S.W.)

The digestive action of this preparation upon starch paste was well marked and exceedingly rapid. The association of glycerine with the active diastase of malt would appear to increase its digestive properties very materially. The preparation is of uniform consistence, possessing an excellent malty flavour coupled with sweetness of taste due of course to the glycerine. We could find no objectionable preservatives which, indeed, would be quite superfluous since glycerine serves this purpose. We regard the combination as of some therapeutic value since in addition to the digestive properties of the malt it should afford a distinct aid also to the assimilation of fat. Glycerine plays an important *rôle* in assisting the absorption of fat. Moreover, glycerine has a favourable influence on the digestive action which probably accounts for its beneficial effect in nutrition. The same preparation is made combined with cod-liver oil, hypophosphites, &c.

SALINE SOLUTION.

(WILLIAM MARTINDALE, 10, NEW CAVENDISH-STREET, PORTLAND-PLACE, W.)

Mr. Martindale has recently introduced a useful and ready means of preparing a normal saline solution for use in intravenous injection. He prepares a saturated saline solution duly sterilised in a glass tube, a definite volume of which when mixed with 2 pints of boiled distilled water yields a normal saline solution. The tube terminates at each end in a fine point which may easily be snapped off by scratching with a file and applying gentle force.

CIBIL'S FLUID BEEF EXTRACT.

(WHOLESALE DEPOT, 2, KENNINGTON-PARK-ROAD, S.E.)

The proximate analysis of this preparation was as follows: water, 67·90 per cent.; organic matters 18·15 per cent.; mineral matter, 13·95 per cent. The organic matters insoluble in alcohol amounted to 6·16 per cent. According to the results yielded by precipitation with a saturated solution of zinc sulphate it contains albumoses to the extent of 2·5 per cent. After this treatment bromine

produced no precipitate, which implies the absence of other proteids. The real nutrient value of this extract is therefore somewhat limited. The fluid remains clear on boiling and on acidification with acetic acid. The amount of water is, as will be seen from the analysis, excessive.

CARGONA LOZENGES.

(THE CARGONA CO., LTD., CROSS-STREET, PETERBOROUGH.)

The composition of these lozenges was soon made evident on analysis. They contain a well-known antiseptic agent associated with an aromatic body possessing similar antiseptic properties. When slowly sucked in the mouth they would tend, of course, to produce to some extent an aseptic condition in the mouth and in the respiratory passages, while in the stomach they would serve to check fermentative dyspepsia. The lozenges contain powerful substances and should not be used without medical advice. They are made in two strengths, medium and full.

TUBORG LAGER BEER.

(THE TUBORG LAGER BEER AGENCY, NEWCASTLE-ON-TYNE.)

We have received samples of Pilsener and Munich beer which have been bottled and Pasteurised in Copenhagen. The analyses were as follows:—Munich beer: extractives, 4·97 per cent.; mineral matter, 0·17 per cent.; alcohol, by weight 4·62 per cent., by volume 5·78 per cent., equal to proof spirit 10·13 per cent. Pilsener beer: extractives, 3·89 per cent.; mineral matter, 0·24 per cent.; alcohol, by weight 4·62 per cent., by volume 5·78 per cent., equal to proof spirit 10·13 per cent. In neither class could any objectionable preservatives be traced. The beers possessed the well-known characters of the lager beer produced on the continent. As is well known the fermentation process is conducted at a comparatively low temperature, the yeast growing at the bottom of the liquor instead of at the top as in the English method. The beers are light, palatable, and wholesome. Good evidence was obtained of the presence only of the bitters of the hop. The flavour of each was satisfactory in spite of the Pasteurising process. Of several samples examined each and all proved to be sound.

MALT EXTRACT WITH PETROLEUM.

(BRADY AND MARTIN, NEWCASTLE-ON-TYNE.)

Malt extract appears to afford a peculiarly good vehicle for oils. The combination with cod-liver oil, as an example, is well known, but this is the first time we have examined an emulsion containing a hydrocarbon. There is no evidence under the microscope until water is added of the existence of an oily body. On adding water, however, tiny globules of oil separate and a milky fluid is the result. In spite of the presence of a very large proportion of petroleum there is very little indication of its presence judging from the taste. The hydrocarbon is evidently of a pure and refined kind. Without saying what the therapeutic worth of petroleum is we think that for medicinal purposes this method affords an excellent means of administering a neutral hydrocarbon.

BIWIN MEAT EXTRACT.

(F. L. BORTHWICK & CO., 381, KINGSLAND-ROAD, N.E.)

The analysis of this preparation was as follows: moisture, 50·00 per cent.; organic matter, 35·75 per cent.; mineral matter, 14·25 per cent. The organic matters were thus classified: insoluble in alcohol, 16·33 per cent.; meat fibre, &c., 4·25 per cent.; meat bases, 15·17 per cent. The precipitate obtained by adding alcohol contained according to the zinc method 3·15 per cent. parts proteid. After the removal of the zinc precipitate bromine gave no result in the filtered solution, the inference being therefore that the preparation is practically free from peptones. We could trace no objectionable preservatives. In the light of recently devised methods of analysis this preparation possesses a comparatively small nutrient value.

HIGHLAND WHISKY.

(A. W. AND D. SKINNER, RAILWAY BUILDINGS, INVERNESS.)

It has been pretty freely stated that in consequence of the enormous demand which has taken place in recent years there is very little whisky in the country which in reality is ten years old. On the face of it there must be some truth in this statement, although undoubtedly the skill of blending is so great that a spirit of mature character though not very old can now be produced. The whisky under analysis is stated to be ten years old. We could gain no evidence in controversion of this statement. On the contrary, it possessed a mild and smooth flavour characteristic of a kept spirit. There was no evidence of the presence of injurious and crude alcohols. The analysis was as follows: extractives, 0·40 per cent.; mineral matter, *nil;* acidity, *nil;* alcohol, by weight 41·30 per cent., by volume 48·75 per cent., equal to proof spirit 85·43 per cent. The spirit appeared to be of excellent quality.

SPANISH BURGUNDY AND CHABLIS.

(JOHN WHITE, 30, LIME-STREET, E.C.)

We have submitted these wines to analysis with the following results. Burgundy: extractives, 2·51 per cent.; mineral matter, 0·40 per cent.; tartaric acid, 0·43 per cent.; acetic acid, 0·36 per cent.; alcohol, by weight 10·46 per cent., by volume 12·96 per cent., equal to proof spirit 22·71 per cent. Chablis: extractives, 2·19 per cent.; mineral matter, 0·29 per cent.; tartaric acid, 0·52 per cent.; acetic acid, 0·28 per cent.; alcohol, by weight 11·62 per cent., by volume 14·37 per cent., equal to proof spirit 25·18 per cent. Both the above wines are styled "La Vallesa de Mandor" and are the same in price—namely, 15*s.* 6*d.* per dozen quarts. We believe that they are good, honest wines. The Chablis is a light, delicately flavoured wine, while the Burgundy though containing less alcohol is more full-bodied. Spanish wines of this class, as a rule, though undoubtedly genuine are apt to be somewhat heavy in character. Those now under analysis appear to be an exception. We obtained no evidence other than that they are the genuine product of fermentation of pure grape juice.

FROMM'S SOUP TABLETS.

(FROMM'S EXTRACT CO., LTD., 5, WHITE-STREET, MOORFIELDS, E.C.

We have received for examination four kinds of tablets for the preparation of soup. The ingredients are exclusively vegetable, yet amongst the number are two called "mock-turtle" and "ox-tail." It is surprising how palatable the soups made in accordance with the direction from these tablets really are and there can be no doubt of their nourishing qualities. The pea-soup tablet and the green vegetable tablets also make a very palatable dish.

MICROVOID TOILET SOAP.

(THE SHARON CHEMICAL CO., LTD., LITTLE CHESTER, DERBY.)

This soap has been tested bacteriologically with good results. We have submitted it to careful analysis which has brought to light the antiseptic and disinfectant agent present which, as in many other cases, is not rendered inert by the soap basis. The soap is pleasant to use, and lathers freely and economically. According to our test it is absolutely free from alkaline excess and is therefore well adapted for sensitive skins. Its value is further enhanced since it possesses distinct germicidal action.

VIBRONA SHERRY.

(FLETCHER, FLETCHER, AND CO., 469, HOLLOWAY-ROAD, N.)

As is well known, sherry serves as an excellent vehicle for many drugs and none the less for hydrobromate of cinchona,

an interesting compound which, while affording the tonic properties of cinchona bark, obviates by reason of the bromine present the so-called "cinchonism." We had no difficulty in isolating the principles of cinchona bark and recognising that they were in combination with bromine. The sherry used is of the light Amontillado type, non-acid and free from excess of saccharine matters. The combination should serve as an excellent tonic and on account of the purity of the wine employed should be acceptable to dyspeptic patients.

LIQUORICE PREPARATIONS.

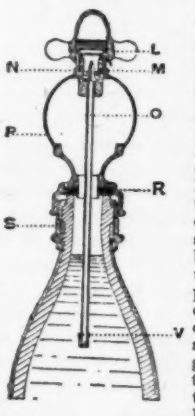
(HILLABY'S, LIMITED, LION WORKS, TANSHELF, PONTEFRACT.)

The value of the extract of liquorice as a demulcent in catarrhal affections or in allaying the irritation of the mucous membrane of the bowels and urinary passages is well known. That it should be as pure as possible therefore is obvious. We have carefully examined the preparations of the above firm which include Pontefract liquorice, liquorice and chlorodyne lozenges, and liquorice pellets. The latter are quite hard and dry but easily become soft on exposure to a moist atmosphere. The analysis of both pellets and the liquorice discs was very satisfactory, the favourable features being an abundant yield of extractives to alcohol and a minimum of mineral matter. They are excellent in their action in gently promoting salivation and in soothing the mucous passages. According to the analysis the quality of the liquorice is the highest attainable.

New Inventions.

THE "SPARKLET" SYSTEM OF CARBONATING WATER.

WE have already alluded in these columns to this handy and ingenious system of aerating liquids, but we have since had the opportunity of examining the appliance which has been improved in several important respects. The accompanying figure will illustrate the construction of the essential part of the apparatus and the principle upon which it works.



The bottle consists of stout glass provided with a cage of split cane. The stopper (P) is hollow and is attached by means of a screw (S) to the neck, a rubber washer (R) being provided to make it quite tight. The action of the apparatus is perfectly simple. The bottle is first nearly filled with water so that the level of the water is just above the dipping tube (O) when the stopper has been screwed into position. At the top of the stopper is a screw cap (L) which accommodates the sparklet, which in reality is a steel bomb containing carbonic acid gas under pressure. The "sparklet" is placed in a rubber ring (M) just over a sharp steel point (N). The cap is placed over the "sparklet" and screwed on. The cap thus gradually forces the sparklet on to the hard steel point (N) which pierces the sparklet, the gas being thus liberated travelling down the dip tube to the nozzle (V) and impregnating the liquid in the bottle. It is better to leave the water some time in contact with the gas to promote absorption. In this way any kind of liquid, wine, or milk, may be conveniently and satisfactorily charged with carbonic acid gas without being diluted. This method gives the advantage that the purity of the water thus aerated can be assured. This handy little appliance is exceedingly useful for travelling purposes. A great number of sparklets may be carried about without any inconvenience. The carbonic acid gas is pure. We regard the invention as a valuable one and as available for a number of useful applications both in the hospital and in the home. It affords further a very ready way of preparing mineral or medicated waters, tablets of a definite formula, e.g., lithium carbonate, being provided for this purpose. The invention is the property of Aerators, Limited, Broad-street-avenue, E.C.

THE "SYPHONETTE" STOVE.

THE accompanying illustration will serve to show a new pattern of a stove which has long been known as a condenser (in part) of some of the products of the combustion of coal-gas. The principle of the working of the stove which distinguishes it from other gas stoves is that the products of combustion are made to travel through a length of pipe which is sufficient to condense the steam evolved into water. In this process the water carries with it the sulphur in the form of sulphurous and sulphuric acids. The water thus obtained which trickles into a tray beneath contains a moderately large quantity of sulphuric acid combined with iron. It is evident therefore that in the act of condensation the sulphur products combine partly with the iron of the pipe. According to our analysis, in fact, the condensed liquid is a solution of sulphate of iron. Amongst the most objectionable products of combustion of coal-gas are sulphurous and sulphuric acids. It is these bodies which make coal-gas destructive to plant life and to the metallic adornments of the furniture in the room. The blackening action of a coal-gas flame on the ceiling is due in some measure to the same products. This stove accordingly effects a very important result in obviating contamination of the air and an amount of destructive action. It is quite correct therefore to regard it as a hygienic heating appliance. The new pattern is known as the "Syphonette," and is made by Messrs. S. Clark and Co., Park-street, Islington. The design is very neat and the stove has a cheery appearance. When in use we did not notice any unpleasant effects upon the character of the atmosphere.

INTERNATIONAL CONGRESS OF OPHTHALMOLOGY.—The Ninth International Congress of Ophthalmology will meet at Utrecht from August 14th to 18th, 1899. Only the English, French, and German languages will be employed. There will be three sections—one for anatomy, pathological anatomy, and bacteriology; one for optics and physiology; and one for clinical and operative procedures. There will be a secretary for each language as follows: English, Dr. A. McGillivray, Dundee; French, Dr. A. Dufour, Lausanne; German, Dr. A. Siegrist, Bâle. The membership subscription is £1. Members may be accompanied by ladies and it is requested that those who intend to take part in the proceedings will intimate the same as early as possible to Professor H. Snellen, Utrecht, Holland, mentioning also which language they prefer to employ. It may be remembered that the last meeting of the Congress was held in Edinburgh and was noticed in THE LANCET of August 18th, 1894, p. 410.

HOUSE-BUILDING AT CARDIFF. — Principal Edwards, President of the Cardiff Cymmrodorion Society, presided at a meeting of the society on Dec. 16th when Dr. Prichard (medical officer for the Llandaff and Dinas Powis Rural District Council) gave a lecture upon Health. Dr. Prichard alluded to certain portions of Cardiff, including Saltmead, where the turf was simply turned over to form a foundation, and he added that it was extraordinary that while for twelve years in the rural district of Llandaff builders had been compelled to put in a foundation of concrete or other impermeable material and also a damp course an important corporation like Cardiff had practically no restrictions with regard to provisions of the kind.

THE LANCET.

LONDON: SATURDAY, JANUARY 7, 1899.

THE opening of a New Year reminds us that it is well sometimes to congratulate ourselves on the advantages of our time, to take stock of the past, and to make some preparation for the future. Nothing is stationary about us. The art we practise is not the same art as our immediate predecessors practised; it is not even the same art as the older members of the profession still with us learned in the schools and for a time practised. The change is so great and so fundamental that we are apt to overlook and undervalue what was really good and valuable in the older practice. The rapid multiplication of remedies and of therapeutical preparations is of itself confusing and it is not altogether a healthy sign. With every desire to keep up with research and the most advanced science we have always to remember that we are practitioners. Our help must be ready and practical. Our business is to deal with disease and its practical points in practical ways. In this light it is possible, not indeed to overrate the value of research, but to underrate the value of experience and of such close clinical observation of disease and its treatment as must be possessed by every good practitioner and teacher of medicine. The chief desideratum is a better understanding between men of research and men of practice. At present there is a wide gulf betweem them. But every year will tend to lessen it and to multiply men who can act as mediators between two classes equally indispensable for the advance of medicine as a science and an art. No man can now rest on what he learned before he qualified, but with a fair amount of attention to medical literature and to the labours of those who work primarily with a view to advance medicine as a science the medical practitioner is in a privileged position for watching the clearing up of those biological problems which bear on his great art and which have so revolutionised our conceptions of disease.

With these views we wish our readers a Happy New Year. And its happiness will be none the less if it is spent in getting our minds cleared of all prejudice and conceit so as to adopt an attitude of justice towards those who would place the art of medicine on a foundation of science without disparaging the teaching of those who in practice have shown readiness, wisdom, and success. The future of the profession depends mainly on the success with which its members realise the fact that they have to adapt and apply the discoveries of others to the relief of suffering, the curtailment of disease, the postponement of death. This is their *raison d'être*. No other profession can have a better one. And it is in the power of every individual practitioner—in the humblest village as in the greatest city, in every ship that sails under our flag, in the most distant of colonies—to make his contribution to the stability and the dignity of his calling.

IT is evident that during the next few years those who have pinned their faith to vaccination and revaccination as a prophylactic measure against small-pox will have a hard battle to fight, not within the profession but amongst those ignorant and self-opinionated leaders of the simple and easy-going who at present are exerting such an influence for evil, an evil which will only become manifest in full degree, perhaps, a generation hence. Whilst we cannot but deplore that owing to the framing of the new Vaccination Act the law allows such a farce to be enacted as that played at Oldham, we, as a profession, must face the fact that it will now, more than ever, be necessary to study vaccination, especially so far as concerns the preparation and preservation of vaccine lymph, in such fashion that we may gradually eliminate the small proportion of danger mentioned in the report of the Royal Commission on Vaccination and do away with all possible objection to vaccination based on what may be called preventable grounds. Assuming that vaccination is essential to the prevention of small-pox on the one hand, and on the other that some of the dangers mentioned by the Commission are real and demonstrable, it becomes the duty of every medical man, by careful observation of his patient, by refraining from vaccinating unhealthy children, and by paying attention to the source of the lymph used, to keep down what are sometimes called "accidental dangers" to a minimum. With all this, however, there are certain difficulties with which it is impossible for the practitioner to contend and in which he must appeal for guidance and help to those who are engaged in special study of the subject.

The danger of taking vaccine lymph from unhealthy or actually diseased children, though often greatly exaggerated, is one which the Commission could not ignore and so deeply were they impressed with the necessity of having vaccination without even the appearance of evil and, above all suspicion, that their recommendation of the use of glycerinated vaccine lymph taken from healthy calves came as an additional argument in favour of thorough and repeated vaccination. If now there is to be a struggle between the civil powers and those who are misguided enough to assume that by repeated iteration of their opinions they will alter the position of the vaccination question it behoves us to be prepared with all the evidence which we can command in favour of the use of pure calf vaccine lymph. One of the principal objections raised to the use of calf lymph is that in certain cases an attack of erysipelas or of erysipelatous inflammation has been the direct outcome of vaccination with this material. There can, of course, be no doubt that very frequently lack of cleanliness or other carelessness on the part of those responsible for the care and nursing of the vaccinated patient ought to be saddled with the responsibility of causing such erysipelatous attack. Allowing for all this, however, a sufficient proportion of cases of "erysipelas" assignable to the use of carelessly prepared calf lymph remains to render it desirable that steps should be taken to eliminate this possible source of danger.

Since Dr. MONCKTON COPEMAN drew attention to the now

well-known glycerine method of preserving and purifying calf vaccine lymph, strenuous efforts have been made abroad to ensure the purity of the vaccine lymph supply, and in England it is generally accepted that the addition of glycerine in certain proportions is a guarantee that the lymph will in time become freed from non-sporulating pathogenic or septic organisms of all kinds, so that if it still retains its "vaccinating" properties it may be looked upon as a "pure lymph" and may be used with safety for the vaccination of healthy children who are kept well nourished and clean.

In order to be able to speak with some degree of certainty on this question we have obtained the advice and assistance of a Special Commissioner of THE LANCET who for some time past has been engaged in making inquiries on the following lines. 1. Is glycerine, in the proportion usually recommended, a sufficiently powerful germicide to ensure the destruction of such micro-organisms as may find their way into the lymph as it is ordinarily collected from the vesicles of the vaccinated calf? The question of time in the action of the glycerine on the active vaccine element has necessarily to be accepted by us as being determined by the period given as that beyond which the lymph cannot be relied upon to remain efficient. 2. Are there any glycerine vaccine lymphs in the market so collected and preserved that the conditions laid down by Dr. COPEMAN in his report to the Local Government Board are complied with? 3. How far do the vaccine lymphs sold as "pure" come up to this description? 4. If glycerine does not render lymph free from ordinary micro-organisms, what are the forms which persist most obstinately and for the longest periods?

It is evident that in an investigation of this nature many side issues and minor questions naturally arise. With these, however, it will be unnecessary to deal, except in so far as they have a bearing on the methods which now generally obtain amongst those who are preparing, collecting, and preserving lymph whether glycerinated or not. We hope in an early number to publish some of the results which have been obtained, but for the present it is scarcely necessary to do more than point out that glycerine undoubtedly, as Dr. COPEMAN has claimed, exerts a marked bactericidal action. At the same time it is evident that upon many of the spore-bearing organisms it has little or no effect. This in many ways is a most important distinction. Streptococci and staphylococci are not ordinary spore-bearing organisms and are therefore comparatively easily killed off; it is thus probable that so far as erysipelas is concerned the addition of glycerine to vaccine lymph will in most cases be sufficient to do away with the risk of ordinary erysipelatous infection. When, however, we come to the spore-bearing organisms which resist the action of glycerine, each one has to be considered on its merits and it will be necessary to make a most careful examination of the pathogenic or irritant effects of all organisms which can come through the glycerine ordeal.

Up to the present of glycerinated lymphs derived from 11 or 12 sources it is found that in one instance only was the lymph really good—that is, on the various occasions on which it was examined there were never more than 13 colonies present, sometimes there were none and usually only three or four. In three other cases the number of bacteria was very small and these were all of a spore-bearing type. A number of the other lymphs contained a very considerable number of micro-organisms, in some cases non-spore-bearing. One sample of lymph was exceedingly bad, another brand was good on one occasion and bad on another, and another which was fairly good on one occasion was bad when examined a second time. On careful examination of these different samples of lymph it appears that the methods of preserving the vesicle from contamination and of collecting the lymph differ in a most remarkable degree. Given the possibility of the exclusion of a large proportion of the spore-bearing organisms in one case, it is extraordinary that this should not be carried out in others, and leaving out of account the staphylococci and streptococci—the organisms most frequently found on the skin—it might be imagined that by taking moderate precautions in the collection of the lymph those organisms which are derived from the surrounding dust and air would not be allowed to make their way into the lymph from which it is afterwards so difficult to eliminate them. If the calf houses and furniture can be kept clear of these spore-bearing organisms in the one case it should surely be possible to do the same thing in others, and until this is insisted upon we must look forward to the appearance of numerous spore-bearing organisms in certain samples of vaccine lymph.

It would be unwise to ignore the fact that most of the ordinary pathogenic organisms—with the exception of the anthrax and tetanus bacillus, the bacillus of malignant œdema, and the bacillus sporogenes enteritidis—are non-spore-bearing, so that allowing that only the spore-bearing organisms persist the use of properly prepared glycerinated calf lymph will in all probability do away with many of the objections which have been urged against the use of such lymph, always assuming that initially active it retains its potency for a certain definite period in the presence of glycerine.

These points, however, it is impossible at present to discuss, but we hope in an early number to give details of experiments and the conclusions drawn therefrom.

AMONGST the terms of reference given to the Royal Commission on the London Water-supply the Commissioners were asked to report whether it is practicable to connect any two or more of the different systems of supply now administered by the metropolitan water companies and if so by whom and in what proportion the cost of connecting them should be borne and what legal powers are necessary to give effect to such an arrangement.

A scheme[1] has been brought before the Royal Commissioners by which all the metropolitan water companies' mains would be connected with one another and by which it would be possible to supply something like 20,000,000 gallons of water daily to any company in want of it. It is proposed that the expense of carrying out the necessary works should be borne by the metropolitan water companies under an arrangement made amongst themselves as to the amount which should be

[1] The details of the scheme are given in another column, p. 49.

contributed by each company. The extra quantity of water which it is proposed to distribute would be filtered at the existing Battersea station of the Southwark and Vauxhall Company. The company has for some years wished to disuse and give up this station and has with that end in view recently completed new works at Hampton. The Battersea station was made many years ago and originally water was taken from the Thames at that point. Later, when under the Metropolis Water Act of 1852 it became incumbent on all the metropolitan water companies to obtain their supply from the Thames at a point above the tidal part of the river, the company arranged to have their intake at Hampton and conduct river water to Battersea where it was filtered before distribution. Under the new arrangements it became, of course, preferable that water should be filtered near the intake and away from the smoke of London. The land at Battersea had also increased very considerably in value and it seemed certain that the sale of land there would go far towards providing the capital necessary to carry out the new and improved arrangements at Hampton. The new work being completed it happens at the present time that the Battersea station is no longer required for the wants of the Southwark and Vauxhall Company. It was therefore possible for the company during the present year to supply the East London Company with a considerable amount of water daily during the drought. It is now proposed to extend the life of the Battersea station for an indefinite time and to make mains from Battersea connecting the works there with the various reservoirs and mains of the other metropolitan companies. A new main passing from Battersea to Campden-hill would communicate with the reservoirs of the West Middlesex and Grand Junction Companies. Another main passing southwards to Brixton would supply the Lambeth Company and other mains would supply the New River, East London, and Kent Companies. Through these new mains and through those which belong to the various companies it would be possible to provide any company which was in temporary want with an amount of from 10,000,000 to 20,000,000 gallons of water daily. The East London Waterworks Company may this year require water from some such foreign source and on behalf of the scheme which we have sketched it is contended that it would be a great advantage to any company to be able on an emergency to obtain temporary supply to tide over the effects of an accident. Against the scheme it may be pointed out that Battersea is not a suitable place for filtering arrangements to be carried out and that the station should not be used longer than is absolutely necessary. From this point of view it may be contended that it is useless to go to great expense in putting down new trunk mains which may never be required. On behalf of the scheme and in reply to this objection it is urged that even if the Battersea station as it exists at present were not always used it would be a not inconvenient place from which water could be distributed through the proposed new trunk mains. Arrangements might ultimately be made elsewhere and nearer to the intake from the Thames for the sedimentation and filtration of the water which should then be sent to the distributing station at Battersea and pumped to the place at which it was required. For this purpose it would be necessary to retain only a small amount of land at Battersea for a pumping engine and the rest of the land might be disposed of.

On the assumption that the East London Company will during the present year require more water than they can obtain from their own sources it is not well in the public interest to oppose a scheme which would amongst other things ensure a better temporary supply of water to the East-end, and if the metropolitan companies are willing to incur the necessary expense it is most unreasonable from a public point of view to oppose any outlay which they consider necessary for conducting their business in the best possible way.

With regard to the detail of the scheme it may, however, be pointed out that at the present time the whole of the metropolitan water companies taken together are authorised to abstract from the Thames a larger amount of water than they find it necessary to supply to their customers. There is no reason therefore why any further authorisation for the abstraction of water from the Thames should be given to the united companies to enable them to carry out this scheme. Another point not without interest to the customers of the New River Company is that under the scheme at present suggested that Company would supply a considerable amount of water to the East London Company and in its place would receive and distribute Thames water filtered at Battersea. It is perhaps doubtful whether the citizens of London, many of whom are said to pay for their water at the price of beer, will be pleased with such a change in their source of supply.

UNDER the heading of "Naval Surgery" the *Times* o Dec. 28th last contained an opportune communication from a retired Inspector-General, R.N., dealing with the surgical and medical equipment provided for that service. Owing to the progressive advance of surgical and medical science it becomes indispensably necessary that many newly-invented instruments and scientific appliances should be provided from time to time if the advantages to be derived from new medical discoveries and developments in surgical art are to be practically applied for the benefit of sick and wounded men. There is a tendency which is perhaps not altogether unnatural, on the part of the finance branches of the public service, to lag behind and to allow their scales and standards to fall short of the actual requirements demanded by our rapidly advancing progress in these respects. The subject, it must be confessed, is not without its difficulties, but we certainly think that Inspector-General WALTER REID has done good service in calling the attention of the Admiralty to the deficiencies which exist in our navy and in pointing out the prejudicial effect which these necessarily entail upon all concerned and upon the medical officers of the fleet who are, of course, keenly desirous of bringing all the resources of their profession to the service of the sick and wounded officers and men committed to their care. That nothing which can be reasonably required in this direction should be withheld is so obviously right in principle that even on the ground of humanity alone there is no need to dwell upon the point. With a view to giving effect to it the sick and

wounded sailor may, in a broad and general sense, be regarded as entitled to look to the State whose servant he is to supply all his needs and to see that he shall not be dependent upon the care, conscience, and opportunities of any individual medical officer for providing him with the latest applied results of medical or surgical science. The survival in the present age of any antiquated system to the contrary is an anachronism. That a too rigid system of economical administration has been hitherto pursued in regard to the Naval Medical Service seems probable and was, at any rate, commonly believed. Be this as it may, however, we entirely concur with Inspector-General REID in absolving the present Director-General, Sir HENRY NORBURY, from any responsibility in the matter and hope that it may be his good fortune to inaugurate during his official *régime* some more liberal and efficient system than that which he found when taking up the direction of the Naval Medical Service. The supply of surgical instruments to medical officers of ships is not, perhaps, an easy matter to elaborate, but we have no doubt that attempts will be made in this direction. As regards the Roentgen ray apparatus it would be easy, we think, to establish a school at Haslar for the special instruction of medical officers in its use and when this knowledge had been acquired, which is soon done, to supply shore establishments at home and some of the large hospitals abroad with the apparatus. Concurring generally, as we heartily do, with the object and spirit of Inspector-General REID'S communication it nevertheless contains a few points which are open to comment. All naval hospitals are, we believe, equipped with instruments and appliances of various kinds on an even more liberal scale than those of the army. The position of the naval medical officer on board his ship is very much the same as that which the surgeon of a regiment occupied when the regimental medical system was in force and it is only fair to observe that he has to provide his instruments at his own cost and so has every private practitioner on commencing practice. We do not say, of course, that the cases are to be taken as quite parallel, for, as we have already contended, we hold that in the interest and for the efficiency of the public service the Government, and not the medical officer, should provide what is necessary for the care and treatment of its own servants when sick or wounded in its service.

Annotations.

"Ne quid nimis."

EPSOM COLLEGE.

CHRISTMAS DAY is past and gone, but the Christmas season is yet with us. There are many demands still remaining upon the purse, some met all unwillingly in the shape of rates and taxes, some met to the utmost extent of the charitable man's purse, such as those which deal with doles to the sick and needy. Of the many charitable institutions scattered throughout the land there is none, we maintain, more worthy of support than the foundation of Epsom College. We do not refer simply to the foundation scholars but to the pensioners. These two foundations, to quote the words of the treasurer's letter to the *Times* of Dec. 27th, 1898, "deserve the support of all members of the community considering how unweariedly medical men labour for rich and poor, always exposed to danger, beset with grave anxieties, and not infrequently losing their lives in the discharge of their calling." The two foundations support fifty pensioners, either medical men in distressed circumstances or the widows of medical men, and fifty scholars, sons or orphans of medical men, at a cost of £6000 per annum. There exist for this good work practically no secured investments and the income is mainly dependent upon subscriptions and donations. A subscription of one guinea constitutes a governor for one year, a donation of £10 10s. makes the donor a life governor. Subscriptions may be sent to the secretary at 37, Soho-square, or to the treasurer, Dr. C. Holman, 26, Gloucester-place, Portman-square, W. The support of this charity is a matter which we have no hesitation in bringing before our readers. It is one for the benefit of our own profession, and in charity as in everything else the proverb holds good that God helps those who help themselves. The rich among us can do much and those not so well off can do a little. If those not connected with our profession see us ready to help our brethren in distress they will be all the more likely and willing to contribute of their superfluity.

THE PREVENTION OF CONSUMPTION.

THE sanitary authorities of Liverpool and Manchester are well to the fore in attempting to carry out some of the projects suggested by the National Society for the Prevention of Consumption and other Forms of Tuberculosis. At the last monthly meeting of the Sanitary Committee of the Manchester Corporation, Mr. Alderman Walter Smith presiding, a deputation was introduced representing the Manchester and Salford Sanitary Association who urged upon the committee the desirability of steps being taken to reduce the mortality arising from tuberculous disease. The deputation included several prominent medical men, some of whom expressed their views as to the steps which should be adopted to induce the community at large to help in the prevention of a "preventable disease." The members of the deputation laid special stress upon the value of segregation. They maintained that the establishment of sanatoria for dealing with cases of phthisis in addition to the direct therapeutic advantages which would be derived might do much in the way of education because they might become teaching places, as it were, where people would be taught how to deal with the causes of infection when they returned to their homes. We think that this is a point upon which hitherto sufficient stress has not been laid, for it is only by interesting and instructing the general community that any advance can be made towards combating tuberculous disease. Some of the speakers laid emphasis on the necessity of bringing phthisis into the same category as other infectious diseases, which would therefore mean notification. To this we most strongly demur. The social results would be deplorable and the enormous number of cases occurring daily would make such a proceeding practically impossible. Not only so, but the difficulty of detecting early cases would be immense. For unless notification were thoroughly carried out the measure would be useless, and every physician connected with a chest hospital knows that the early cases coming under treatment bear a small proportion to the total number of cases, especially amongst the men. The working classes are of necessity obliged to continue at work as long as possible, and the onset of pulmonary tuberculosis is so insidious that the patient will not apply for medical advice

until the disease is fairly well advanced, consequently all such cases would escape notification for many months. With a speaker who took advantage of a smoking concert at the Breck-road Branch of the Working Men's Conservative Association at Liverpool to explain in simple language the means of spread of tuberculosis we are more in accord, for he dwelt mainly on the milk-supply and the importance of the superintendence of cattle, and we sympathise with the complaint embodied in the words "although tuberculosis is the principal cause of death in this city [Liverpool], the local authorities have no power to prosecute the vendor of the disease or insist upon the separation of diseased cows from healthy animals."

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

THE honorary secretaries of this Fund have issued a tabular statement of the awards granted during the year 1898. A short account of these awards has already appeared in the daily press and the method and scope of the distribution do not seem to have met with unqualified praise. The report states that only those hospitals lying within a radius of 7 miles from Charing-cross which applied for grants within the stated time in answer to the advertisement inserted in the metropolitan journals have been assisted by the Fund. In all 46 hospitals received grants and 12 others applied who did not receive them. Besides these 13 convalescent homes received grants. Of the metropolitan hospitals with medical schools attached two, namely, St. Bartholomew's and St. George's, received nothing. On looking at the published details of the grants (the report will be found in another column) it would seem that some of the hospitals aided will not be very much better off—so far, that is to say, as regards their financial position—for in many cases—e.g., the Hospital for Diseases of the Chest, Victoria Park, the Great Northern Central Hospital, and the North London Hospital for Consumption—the grant is made conditionally on the opening of beds now closed, and in one case, that of the Female Lock Hospital, that the amount necessary for the reconstruction of the drainage of the hospital be provided for as soon as possible, from which we may presume that the grant from the Fund—a sum of £500—is not to be used for this purpose. In our opinion it is of some importance for a hospital to be in a solvent condition, unless, indeed, this would deprive the institution of the power of making the appeal *ad misericordiam* which a load of debt supplies. The distribution of money is, however, always a thankless task. There are always undeserving establishments as well as undeserving individuals and they are both apt to think that they are the contrary. But all the same we give the managers of the Fund every credit for a painstaking effort to make a worthy distribution.

THE NEW YEAR HONOURS.

THE selection of names in the honours' list for the New Year is so varied that it is not likely to be anything else but popular. Of the rewards to members of the medical profession a baronetcy goes to Sir Henry Thompson, F.R.C.S.Eng., whose work in the domain of surgery and especially that of the bladder is well known to the profession. As President of the Cremation Society he has done not a little to popularise cremation as a method for the disposal of the dead. Dr. Hermann Weber, F.R.C.P. Lond., who is a well-known authority on climatology and balneology, receives a knighthood, as does also Dr. G. Plunkett O'Farrell, Commissioner of Control and Inspector of Lunatic Asylums in Ireland. Sir Charles Cameron, M.D.Dub., is to be made a Companion of the Bath, an honour which is well deserved. Mr. R. U. Moffat, M.B., C.M.Edin., Principal Medical Officer of the Uganda Protectorate in East Africa, and Mr. J. S. Macpherson, L.R.C.P. & S. Edin., also of the Uganda Administration, are to be made Companions of the Order of St. Michael and St. George. Colonel William Pleace Warburton, M.D. Edin., I.M.S., and Colonel David Sinclair, M.D. Aberd., I.M.S., receive Companionships of the Order of the Star of India, and Lieutenant-Colonel Henry Kellock McKay, M.R.C.S.Eng., I.M.S., and Major Winthrop Benjamin Browning, L.R.C.P. & S. Irel., I.M.S., Companionships of the Order of the Indian Empire; Captain John Lloyd Thomas Jones, M.B. Durh., I.M.S., Captain William Ernest Jennings, M.B. Edin., I.M.S., Captain Arthur Frederick William King, M.R.C.S. Eng., L.R.C.P. Lond., I.M.S., and Lieutenant William James Niblock, M.B. R.U.I., I.M.S., are to be enrolled as Honorary Associates of the Order of the Hospital of St. John of Jerusalem in England. It is noticeable that the greater proportion of medical honours go to members of the Indian Medical Service, but it must be remembered that the Soudan honours have only recently been issued when the British medical service did not go unrewarded. This large military proportion, we think, shows the increased attention which is being paid to medicine in army matters and reflects in a large measure the great military strength of our empire.

THE LANCET RELIEF FUND.

THE report made this year by the Almoners of this Fund, founded as it is upon the accounts of the tenth year of its operation, suggests very naturally a somewhat more extended review than that of the period of twelve months which comes directly under observation. The year itself repeats in a striking manner the features to which we last year drew attention as being salient and satisfactory points in the experience of the charity. That is to say, it is again a notable feature of the report that the benefactions show a reduction both in number and amount, a circumstance from which it seems to be a fair inference that the pressure of necessity upon those of our professional brethren who have fallen upon evil times has been sensibly less acute than in some recent years. The experience of a single year would seem to afford but a slender basis for any general conclusion of this sort and it is therefore very pleasant to be able to point to a sequence of two annual reports tending to the same conclusion. When, moreover, it is borne in mind that the same period of time has been marked by many signs of general prosperity it is reasonable to take a sanguine if not confident view that the diminished stress is not more apparent than real and that the flood tide of a prosperous time has found its way even into the shallows where adversity is at home. Taking, however, the wider survey which is suggested by the close of a decade we note as matters of some special interest the figures which serve as indexes to the character of the charitable work to which the Fund has been subservient. Chief among these are the items which denote the sums granted by way of loan and by way of gift respectively. Out of a total of £2899 12*s.* distributed the sum of £1787 2*s.* has been given out-and-out, the balance of rather over £1100 having been nominally lent. We say nominally lent because it is found in many cases that the borrower is not able to redeem his promise to repay and thus a considerable proportion of the benefactions which figure as loans in the annual statements of account are loans only in name—in substance they also amount to gifts. The cases therefore which can be effectively aided by a loan are shown by experience to be fewer and to total to a less aggregate amount than those which demand the assistance of an unconditioned grant. And this is a feature which tends to become more and more pronounced. It was sufficiently marked

in last year's statement to call for comment; it is still more conspicuous in the statement now under review. In this we see no matter for regret, although it must be admitted that to those who are behind the scenes and know the details of all the various cases dealt with there are none more interesting, none in which it is possible to extend the helping hand with a livelier sense of satisfaction than those in which a timely loan helps a brother overtaken by sudden adversity to help himself. That of a truth is the kind of mercy that is "twice blessed" and in the person both of him who gives and him who takes. Nor should it be forgotten that the repayments made by those who had benefited by the Fund form a most welcome addition to the resources of the Almoners and one by no means to be despised, seeing that a sum of upwards of £200 has in this way been placed at their disposal during the period now under consideration. This work, as we have before remarked, is so intimately associated with THE LANCET that we feel ourselves at liberty when writing about it to express our sincere thanks to the honorary officers—Almoners and Auditor—who have during the past year undertaken the duty of administering the Fund. Sir Samuel Wilks, Sir William Mac Cormac, and Sir Henry Pitman have in this way renewed the evidence which they have given in previous years of their interest in the welfare of the most unfortunate of our professional brethren. Sir William Turner who has been elected to the Presidency of the General Medical Council, vacated by the lamented death of the late Sir Richard Quain, has kindly consented also to assume the charitable *rôle* of an Almoner of THE LANCET Fund and has personally interested himself in the discharge of its duties. In presenting to each and all of them our thanks we assume to speak not only for ourselves as donors of the Fund, to whom its due administration is naturally a matter of solicitude, but in the name also of those who benefit by it and whose gratitude, not always articulate, is in not a few cases evidenced by expressions which it is a privilege to convey but a satisfaction largely alloyed with sympathetic sorrow to receive. The application form of THE LANCET Relief Fund will be found in our present issue and can be readily detached for use in case of need. We again take an opportunity of asking those of our readers who may have occasion to assist in furthering any application made for relief from this source to note carefully the conditions on which applicants become entitled to participate in the benefits of the Fund, as it is still found that many requests are put forward which are so far outside the objects of the benefaction that they cannot be entertained and from such applications nothing but disappointment can result. All applications should be made (in writing) to the Secretary, Mr. Edward Davies, THE LANCET Offices, 423, Strand, London.

TRUE HEROISM.

ON Dec. 28th, 1898, occurred an opportunity for one of those acts of unassuming heroism which we are proud to be able to say are not so very uncommon amongst us. In Clerkenwell Close there lives an electro-plater by name Grimme, but he was away and the foreman, Franklin, was in charge. The workshop is very small and the materials and chemicals necessary for the trade have mostly to be placed on the floor. At the time of the accident there stood on the floor an earthenware pan containing some 6 gallons of sulphuric acid and an iron pan full of cyanide of potassium. Franklin's three children were in the room and they, it is supposed, upset the vitriol which coming into contact with the cyanide immediately gave rise to a rapid evolution of hydrocyanic and carbonic acids. A boy named James Wright who was standing outside the room said he saw a thick smoke rising, noticed that two of the children had fallen into the pool of acid on the floor, and that Franklin had also sunk down. Wright ran upstairs, opened a window and called for help, after which he lost consciousness for a few minutes. On coming down he saw a soldier on the stairs. He groped his way into the room, hauled out one child by the legs, gave it to the soldier and again became unconscious. The soldier, who is a gunner in the Royal Artillery named William Hall, was going along the street when he noticed a crowd. He made his way into the house three separate times and brought out the children first and afterwards the father. The sufferers were taken to St. Bartholomew's Hospital and attended to. We have told this tale very plainly, but it seems to us that the action of both Wright and Hall is beyond all praise. Very possibly neither quite knew the danger which he was running, but anybody who has ever experienced that sensation of being gripped by the throat which the inhalation of hydrocyanic acid and carbonic acid produces will appreciate the pluck shown by these two heroes, and especially the bravery of Hall who went into the house three separate times. The crowd outside, by way of contrast, stood still, stared, and did nothing. The pluck of Hall and Wright will never be forgotten, and we hope that they will receive the Albert medal or some similar recognition of their admirable conduct.

THE NERVOUS SYSTEM IN SCLERODERMA.

IN the December number of the *Glasgow Medical Journal* Dr. Lindsay Steven publishes a lecture on a very interesting and important case of scleroderma in which there was pronounced hemiatrophy of the face, body, and extremities and in which he had an opportunity of examining the condition post mortem. A full clinical account of the case was published in the *International Clinics* in 1897. As regards the patient's condition on readmission to hospital in the spring of 1898 it need only be said that her skin on the affected side showed breaking down and ulceration, and it was on account of this and of the symptoms of an ovarian tumour—symptoms dating from August, 1897—that she sought readmission. Abdominal section was performed for the removal of this tumour but unfortunately she succumbed on the third day after operation. As regards the internal organs it need only be said that there was complete absence of pericardium, and there were cicatrices in the spleen and a condition of the kidneys of mixed parenchymatous and interstitial nephritis. The cortical matter of the hemisphere opposite to the atrophic side was perhaps a little thinner, but no microscopic examination is recorded. In the spinal cord, however, the grey matter of the right (the affected side) anterior horn was diminished, the ganglion cells were smaller and less numerous, and their nuclei and plasma granules were not so well defined as in the corresponding cells of the opposite side. The neuroglia also in the right horn seemed denser than in the left. Corresponding changes could not be made out in the medulla or pons. Throughout the cord, medulla, and pons the arteries, especially of the grey matter, were surrounded by spaces, either empty or containing a structureless homogeneous material, and most of these spaces had well-defined margins. The nerve fibres from the cervical and lumbar plexuses showed a well-marked parenchymatous degeneration. The skin showed the absence of fat, thickening of the horny layer, and atrophy of the papillæ. Between the papillæ and the muscles there was a thick layer of dense connective tissue. Dr. Lindsay Steven regards the atrophy of the anterior horn, the changes in the cells there, and the cavities around the vessels as of much importance and significance in reference to the morbid anatomy of scleroderma. He looks upon the condition as the result of these changes—i.e., as a trophoneurosis of central

origin. The neuritis he regards as secondary and recent. The case is of much interest and its importance is enhanced by the long time—twelve years—during which the patient had been under observation. We should doubt, however, whether Dr. Lindsay Steven's explanation of the relation of the changes in the skin to those in the central nervous system will be quite satisfactory to everyone, and we should have thought it would hardly be necessary to invoke some recent parenchymatous neuritis to account for changes in the peripheral nerves. With such changes in the anterior horn cells and in the skin, changes in the nerves, both parenchymatous and interstitial, would be quite what we should expect. It would also be interesting to know the microscopical character of the changes in the cerebral cortex.

THE NEW PHYSICAL LABORATORY OF THE OWENS COLLEGE, MANCHESTER.

THE laboratory of which the foundation-stone has been laid on the twenty-fifth anniversary of the occupation of the present Owens College buildings will be the largest and most completely equipped in this country. It stands on a separate plot of ground adjoining the Owens College site and consists of a main building and a large annexe, the latter being more especially intended for electro-technical work. The principal building is 100 ft. long and over 60 ft. wide and consists of a basement and three storeys. The cost of the building with fittings and new apparatus is estimated at £30,000. It is intended to have at least one room set aside for constant temperature work and to establish a small plant for the production of low temperatures. An electro-technical laboratory will be added in which large currents will be available for electric furnaces. One of the features of the laboratory will be a carefully-planned system of ventilation combined with an attempt to exclude dust as far as possible from all rooms and especially from instrument cases. The plenum system had to be rejected because it takes up too much valuable basement space, because it is ineffective as regards exclusion of dust, and because the inevitable noise and mechanical shaking due to the fans would have seriously interfered with the work of the laboratory. The architect is Mr. J. W. Beaumont who, before finally drawing the plans, was sent by the Council of the Owens College to visit the principal modern laboratories of Germany.

VACCINATION LITERATURE AND LEAFLETS.

WE are asked from time to time where literature on the subject of vaccination can be obtained such as would be suitable for the purposes of educating the public in this matter by the aid of lectures and by the gratuitous distribution of trustworthy pamphlets and leaflets. We would refer inquirers as to this to Dr. Francis Bond, honorary secretary of the Jenner Society, Gloucester. Under Dr. Bond's supervision a series of very valuable pamphlets and leaflets has been compiled. Some are suitable for lecturers, others for issue to the public by vaccination officers, others, again, for distribution by district visitors. On this subject it is desirable to remind boards of guardians who desire that children within their jurisdictions shall be protected against small-pox and its miserable consequences that section 28 of the Vaccination Act, 1867, is still in force, and that under this section they are empowered to pay out of their funds all reasonable expenses in circulating information on the subject of small-pox or vaccination and in taking measures of this sort in order to promote vaccination. This section has always been held fully to cover the distribution of literature of this description and it would be well if public vaccinators were to urge boards of guardians to supply leaflets such as are issued by the Jenner Society to vaccination officers with a view to their distribution together with any notices which they may have to issue in accordance with the regulations governing the duties under the Act of 1898.

THE CENTENARY OF THE RUSSIAN MEDICAL MILITARY ACADEMY.

ON Thursday, Dec. 29th, at St. Petersburg the celebration of the Centenary of the Russian Medical Military Academy was opened by a religious service. The prize distribution to the successful students of the year then took place in the presence of the Grand Duke Constantine (the Honorary President of the Academy) and of the Minister of War and other distinguished men, including the Bishop of Finland and other ecclesiastics. Early on Friday morning a grand requiem service was held in memory of past Russian Emperors, patrons of the Academy. The great function of the celebration took place afterwards in the largest hall in St. Petersburg before a most distinguished company presided over by the Minister of War, the numerous decorations worn upon the brilliant uniforms of the officers and the bright colouring of the academic costumes of various nationalities giving much grandeur to the scene. Representatives from universities and scientific bodies were presented on the raised platform and offered congratulations from their respective societies. Among the British institutions which sent messages were the Royal Society, the Universities of Oxford, Cambridge, Edinburgh, Glasgow, and Aberdeen, and the Royal College of Surgeons of England. The delegates from these bodies comprised the Dean of Trinity Hall, Rev. H. S. Cronin, Professor Shipley, Mr. Owen, Mr. Cross, Professor Ogston, and Dr. Ferguson.

FRACTURE OF THE INTERNAL TABLE OF THE SKULL.

FROM *a priori* considerations we should hardly have considered it possible that the inner table of the skull could be broken without any fracture of the outer table, yet this lesion has been observed many times and Captain Standage, I.M.S. recorded an instance of its occurrence in THE LANCET of Nov. 26th, 1898, p. 1388. The earliest reference to this form of injury is to be found in a work called "De Fractura Cranii," published by Jacobus Berengarius in 1535; Ambrose Paré alludes to it also.[1] Garegeot relates a case observed by Mery.[2] Pott mentions two cases in his work "Observations on the Nature and Consequences of Wounds and Contusions of the Head."[3] Samuel Cooper described the condition in his "Surgical Dictionary."[4] W. F. Teevan[5] was the first to point out the true explanation of the greater extent of the fracture of the inner table in ordinary fractures of the skull and therefore the reason why the inner table may be broken while the outer suffers no injury. He showed that in all fractures it is the side of extension and not the side of compression which is the first to break, and when the skull is struck the outer table is compressed and the inner table is stretched. Guthrie, in his "Commentaries on the Surgery of War,"[6] describes the occurrence of this form of injury, but probably the best account is to be found in the "Medical and Surgical History of the War of the Rebellion"[7]; during that war there were 20 cases in which the inner table was broken without any fracture or depression of the outer table; in 4 of the cases trephining was unavailingly performed and only 1 patient recovered of the whole number of cases. La Motte[8] stated that a "cracked pot sound" could be obtained

[1] Œuvres, vol. x., p. 225, 1652.
[2] Traité des Opérations de Chirurgie, second edition, 1738, vol. iii., p. 122.
[3] London, 1760, p. 16.
[4] Eighth edition, p. 899.
[5] British and Foreign Medico-Chirurgical Review, vol. xxxvi., p. 189.
[6] Sixth edition, p. 341.
[7] Part I., vol. i., p. 141.
[8] Observations de Chirurgie, vol. ii., p. 303.

over the broken bone and Strohmeyer[9] found the pitch on percussion to be distinctly high. It is difficult to give any exact estimate of the frequency of the lesion for it is probably often overlooked and if the fracture gives rise to no symptoms recovery may occur without the surgeon recognising that any fracture has taken place. Prescott Hewett[10] found 3 cases in 78 necropsies on cases of injuries to the head; in two of these the lesion was very slight, but in the third case it was severe. He mentions that he had met with only one other case. When the question of the etiology is investigated it is found that in a large proportion of the recorded cases the oblique impact of a bullet has caused the fracture,[11] while in some the injury has been due to a "spent" ball. In a case recorded in 1880[12] the patient received a "brush" blow from the handle of a crane. Of the 20 cases recorded in the "Medical and Surgical History of the War of the Rebellion" 14 were due to the oblique impact of musket balls. It is probable that with our modern projectiles of high velocity this variety of fracture of the skull will be less frequently seen.

MENTAL CONCENTRATION UPON A PART AS A FACTOR IN THE FORMATION OF A NEW GROWTH.

IT has long been a popular idea that too much thinking about any particular part or organ may lead to disease of that portion of the body, but it must be confessed that very little substantial basis of fact has served as foundation for this superstructure. Dr. Carpenter was, we believe, the first to point out and to demonstrate by experiment that concentrating the mind on a special part of the body will lead to a local hyperæmia with sensations of tingling and itching, but, so far as we are aware, no true inflammation was ever produced. It is not difficult to understand that the directing of the mind towards some particular part of the organism may alter the blood-supply of that part and so may modify materially its nutrition. If this be possible—and who can say it is not?—it is not at all unlikely that morbid changes may result from, or be predisposed to by, these slight beginnings. It is very difficult, however, to find many cases which can only be explained satisfactorily by some such theory. Mr. W. H. Bennett, in a clinical lecture recently delivered at St. George's Hospital and published in this issue of THE LANCET, quotes two cases which if not convincing are at least very suggestive. In each of them increased growth of a tumour appeared to follow the continued concentration of the patient's attention on the part. It has occasionally happened that a physician or a surgeon who has paid particular attention to the diseases of some one organ or region of the body ultimately suffers from an affection of the same part. These cases, though striking, are but few in number and no more numerous than would be expected from the laws of probability. If there were any certain foundation for such an idea medical men might be found to hestitate before "specialising" on the more painful and unpleasant diseases to which the body is liable.

THE LIVERPOOL LADIES' CHARITY AND LYING-IN HOSPITAL.

BY a majority of 45 to 31 votes the subscribers to the Liverpool Ladies' Charity and Lying-in Hospital carried the following resolution: "That single women in exceptional circumstances who, after careful investigation by the ladies' committee, are found to be deserving objects of charity, shall be eligible for admission into the hospital for their first confinement." It was pointed out by Mrs. Henry Tate, who moved the resolution, that its terms were in accordance with the rule which was in force at the City of London Lying-in Hospital dealing with similar cases. She wished it to be understood that the supporters of the resolution only wished to deal with women otherwise respectable, such as shop assistants and domestic servants. They would have nothing to do with women of the profligate class and such as were familiar with the rescue homes and the nigh mission. The proposal had the approval of the promoters of the Victoria Women's Settlement, Monsignor Nugent and the Countess of Derby. The latter was eminently qualified to speak on the question as before she went to Canada she had for eight years under her supervision a home containing twenty beds, the occupants of which had all turned out satisfactorily with the exception of two. Much stress was laid upon the fact that the hospital which contains fifteen beds had only three and a half beds occupied per week, which clearly shows that the position of the poorer women had altered since the foundation of the charity in 1841. At that period the opportunities afforded for nursing these poor women in their own homes were not so favourable as at the present time. The advances made in the direction of sanitation, better wages, and cleaner houses for the working-classes enabled them to remain at home during the period of confinement in a large proportion of cases. These circumstances indicate that the objects for which the charity was initiated were to a great extent defeated by the force of changing times and that the hospital might be utilised in deserving cases for the benefit of a class largely more sinned against than sinning. The rule of a hospital which only affords benefits to less than one-fourth of the number provided for by the founders is clearly in need of modification. It is computed that 200 respectable unmarried girls are confined yearly in the Liverpool workhouses. These poor girls cannot avoid contamination from the associations with which they come in contact, thus affording an additional argument for a more humane line of treatment in the matter of admitting them to the wards of a lying-in hospital (special or otherwise as the case may be). The resolution had the warm support of Mr. William Rathbone, whose length of experience in the management of general hospitals and workhouses is probably unequalled. The change of law will involve considerable expenditure in the matter of additional beds and probably in the construction of a new block. Promises of contributions have already been made for these objects and the generally expressed opinion prevails that the subscribers to the charity in their new departure have acted in accordance with the charitable spirit of the age.

THE PROPHYLAXIS OF PLAGUE BY HAFFKINE'S INOCULATION.

ON Nov. 22nd, 1898, Mr. Balchandra Krishna, the President of the Grant College Medical Society of Bombay, read an interesting paper before that society on the prophylaxis of plague by Haffkine's method. The inoculating fluid is prepared by sowing plague virus in a neutral mutton broth mixed with a small quantity of cocoanut oil or ghee. When the growth is at its height the culture is heated and carbolised. It is then set aside, when the fluid separates into two portions, the one a sediment containing the remains of the bacilli, the other a limpid fluid. It is the latter which is used for prophylactic inoculations. The dose for a healthy adult male is 2·5 c.c. of a standard solution which is repeated in ten days or a fortnight. There is a good deal of reaction, the temperature rising to 102° or

[9] Maximen der Kriegsheilkunst, second edition, p. 331.
[10] Transactions of the Royal Medical and Chirurgical Society, 1853, p. 338.
[11] Duplay and Reclus: Traité de Chirurgie, vol. iii., second edition, p. 418.
[12] Brit. Med. Jour., Nov. 27th, 1880, p. 844.

104° F. with a feeling of malaise, but this subsides in twenty-four hours. Pain at the seat of inoculation lasts from four to five days and then subsides. M. Haffkine's preliminary experiments were made on rabbits. Twenty were taken, of which ten were inoculated. All the twenty were then infected with plague. All the ten unprotected died while the ten inoculated ones lived. In the case of human beings inoculations have been made at ages varying from seventy years to ten days. Up to the present no evil results have been noticed to follow the injections. In the inoculations performed in Bombay during the first year of the recent epidemic there were three deaths which occurred within a few days of inoculation. One of these was from definite plague, one from suspected plague, and one from paralysis. The number inoculated altogether was 8142. Pregnant women do not abort if inoculated with small doses often repeated. Besides the prophylactic effect against plague the inoculation would seem to have a good result in cases of chronic malarial fever. Mr. Krishna cites the cases of Captain Macdonald, I.M.S., and his servant, who were inoculated when suffering from chronic attacks of fever with the result that the fever left them. As to the efficacy of the inoculation the instance of the Byculla House of Correction shows that it does possess a real protective effect. During an epidemic in this prison 173 persons were uninoculated; of these 12 were attacked and 6 died. Of 148 inoculated 2 were attacked and both recovered. In Damaun 2197 were inoculated and 36 died. Of those uninoculated, 6033 in number, 1482 died. Many of the tables of experiments in various districts are given and the conclusion drawn by Mr. Krishna from them is that Haffkine's process has a very real protective influence against plague. In his opinion "it is our duty as medical men to encourage it by all possible means and to induce the public to take full advantage of it."

RED CROSS EXTENSION.

IN the Students' Number of THE LANCET for 1893 we commented on the ever-enlarging field for medical science and medical practice, taking as our text the proposal made at the last International Congress of the various Red Cross associations that that great "relief organisation" should widen its scope and include not only the transport, the tendance and the treatment of the wounded on the field, but also the care of the injured in the colossal disasters so frequent in modern life—mining explosions, floods, earthquakes, railway accidents, and such like, as well as the sufferers in famines, droughts, and epidemics. Here, it was said by the authors of that proposal, we have a well-trained, amply-equipped relief service, mainly medical in its inspiration and its *personnel*—a service, moreover, completely its own master except on the outbreak of war. Why should it be idle when in time of peace a widespread, far-reaching calamity overtakes a district or a populous centre and not put its admirable organisation and working staff at the disposal of the sufferers? Advanced as a "pious opinion" and superficially discussed at the International Congress referred to (that at Rome in 1892), the proposal was seriously taken up and in great measure threshed out in the succeeding International Congress (that held at Vienna). Now, in view of the next congress of the kind the various Red Cross associations throughout Christendom have been invited to consider the best means for giving practical effect to this new development so as to contribute to the preparation of an "order of the day" which, on approval by the congress, shall thereafter become part of the programme of the Red Cross and bring the organisation into closer touch with daily life and modern evolution. Surely this is a proposal which is deserving of cordial consideration and support. The Swiss, the German, and the Russian delegates at the Vienna Congress spoke for their respective nationalities in its favour, and it is expected that at the next congress Great Britain and France will also give in their "adhesion." Italy, indeed, has long ago anticipated the proposal by her practice. Visited more than any other European country with floods and earthquakes, and with her full share of the casualties incurred by modern life, she has not scrupled to employ Red Cross service for the relief of suffering so occasioned; and, while always respecting the funded resources specially set apart for the wounded in war, has utilised the trained *personnel* of the organisation wherever on a large scale its intervention was required. She has even started subsidiary services, the "Croce Bianca" and the "Croce Verde," (White Cross and Green Cross), to render similar aid—services which, of course, will be absorbed into the greater unity of the Red Cross when once the proposed development of this latter becomes law. In Tuscany the "new departure" contemplated has been enthusiastically taken up and the leading aristocracy, reinforced by the clergy and the more public-spirited of the citizens, are founding sub-associations to fall into line with the main body on its assuming civilian in addition to military duty. Demand for increased medical assistance is one of the inevitable consequences of the movement and the War Office is affording facilities at the autumn manœuvres for the training of a more numerous *personnel*. Amid much that is discouraging and even disquieting in Young Italy, her alacrity to promote "Red Cross extension" is certainly consolatory and reassuring. She claims, not without right, priority in having conceived the organisation in time of war. She is laudably making it her ambition to be the first to utilise it in time of peace.

THE TREATMENT OF ANEURYSM BY THE CONJOINT USE OF GALVAINSM AND INTRODUCED COILED WIRE.

A REPRINT has been issued of a paper which appeared in the *Philadelphia Medical Journal* for Nov. 17th, 1898, by Dr. D. D. Stewart, on the above subject. After referring to cases on record which have been similarly treated he gives details of seven cases which were either under his own care or in which he was personally interested and directed the technique. The results were most encouraging, the more prominent symptoms of the disease being kept in abeyance and, as shown by the examinations made after death long periods after the operation, the fatal termination not always being due to the aneurysm, well formed and organised clot was discovered. Dr. Stewart briefly summarises the main features of the operation. It consists in introducing into the sac, under the strictest antiseptic precautions, a fine coiled wire previously so drawn that it may be readily passed through a thoroughly insulated needle of somewhat larger calibre than the wire and after introduction may assume marked spiral coils, so that, with a moderate amount of wire, the entire calibre of the sac will be occupied by wire unless the cavity be already filled with coagula or the sac be of unusual size. Silver, gold, and platinum wire are undoubtedly the preferable materials. The amount of wire required depends necessarily upon the calibre of the aneurysmal sac and must be decided upon with the greatest nicety of judgment, as with too small an amount little or no result will be obtained and with too great a quantity permanent cure through obliteration of the sac by contraction of the clot cannot be expected. The anode or positive pole should invariably be the active electrode. This is connected with the wire and the negative rheophore, a large clay plate or an absorbent cotton pad made after the method of Maney, is placed upon the abdomen or the back. Experience has shown that the current should be gradually increased in strength, finally

reaching from 40 to 80 ma., and the time of application should be from three-quarters of an hour to one and a half hours. The solidification is rapid and is generally manifest before the end of the electrical session through changes apparent to the eye and the hand in the pulsation and in the degree of consistence of the sac wall. These changes become more decided in the course of a few days, until after a time in the most favourable cases a hard nodule with a communicated pulsation alone replaces the previous expansible tumour. This was the history of 4 of the 10 cases now on record.

THE MEDICAL DIRECTORY: THE DISTRIBUTION OF THE MEDICAL PROFESSION.

LAST week we mentioned the receipt of the Medical Directory for 1899, and we now proceed to give some details of the statistics contained in this valuable work of reference. The whole number of practitioners for 1899 is 34,994—an increase over the figures for 1898 of 91, a very decided drop from the increase for 1898 over 1897, when the figures were 619. The practitioners included are distributed as follows, the numbers for 1898 being given in brackets:—Number of practitioners in the London list, 6117 [6081]; in provincial England, 15,497 [15,400]; in Wales and Monmouth, 1100 [1081]; in Scotland, 3394 [3412]; in Ireland, 2551 [2615]; resident abroad, 3795 [3770]. * Naval, military, and Indian medical services, excluding those who appear also in other lists, 2528 [2521]; too late list, 12 [23]. The deaths numbered 532, as against 599 in 1898, though of course this number is under the real amount for the year. We see that Monmouth still continues to be included under Wales and in the list of London hospitals with medical schools the extraordinary alphabetical or rather non-alphabetical arrangement is retained by which St. Bartholomew's Hospital is put first as "Bartholomew's (St.)," while St. George's, St. Mary's, and St. Thomas's are placed under the letter S. The legal and other information is given with the usual accuracy, but we think something more might have been said about the working of the new Vaccination Act, for the new order was dated Oct. 18th. There is so much that is good in the Directory that we only mention these failings with the wish to see future editions yet more perfect than the present one.

TUBERCULOSIS IN LAMBETH: WISE SUGGESTIONS BY THE MEDICAL OFFICER OF HEALTH.

DR. JOSEPH PRIESTLEY, the medical officer of health of Lambeth, has presented to his vestry a report upon the nature and preventability of tuberculosis which contains the following wise suggestions:—(1) That a circular letter be sent round to all the medical men in Lambeth pointing out that the vestry is prepared to disinfect free of cost all rooms with their contents recently occupied by patients suffering from tuberculosis, which have become unoccupied owing to the deaths or removals of such patients when requested to do so by the medical men or others in attendance; (2) that a circular letter be sent to the person or persons in charge of public institutions in Lambeth pointing out the nature of tuberculosis as a disease and the importance of having means adopted for the prevention of its spread and offering disinfection free of cost by the vestry's officers where it may be necessary; (3) that a circular letter be sent to the occupiers of those houses in which deaths from tuberculous disease are reported week by week to the medical officer by the Registrar-General offering disinfection free of cost by the vestry; and (4) the issuing of leaflets pointing out in simple language the danger of the disease and the ready means at hand for its prevention to clergymen, district visitors, school teachers, and such persons who from their position may be expected to have opportunities for disseminating the information. We commend Dr. Priestley's suggestions and the action of his vestry in promptly adopting them *in toto*. If the disinfection processes supplied gratis by the vestry of Lambeth are followed by proper cleansing, scraping, and whitewashing by the owners of the infected dwelling places we may expect a notable fall in the local mortality from phthisis, while the value to the community of a supply of sound reasons why they should take precautions themselves against the spread of disease cannot be readily over-estimated.

MAGISTRATE AND CORONER.

OUR readers will remember that recently an inquest was held by Mr. Braxton Hicks on the body of a child aged seventeen weeks. Mr. James Jerome Mackay, acting on the coroner's warrant (which requires an examination of the viscera, head, thorax, and abdomen), examined the remains and subsequently swore at the inquest that *in his opinion* death was due to congestion of the brain, presumably basing his judgment upon facts observed at the necropsy. A second examination was conducted by Mr. F. C. Kempster and Dr. L. S. McManus, and these gentlemen testified at the adjourned inquest that "no proper examination of the body had been made; that the brain was not congested; and that death was due to asphyxia consequent on double pneumonia." Before calling upon Mr. Kempster and Dr. McManus for their evidence the coroner asked the jury for their opinion of the cause of death on the grounds furnished by Mr. Mackay's testimony. Mr. Braxton Hicks cautioned Mr. Mackay who adhered to his previous statement on oath. The jury eventually found that death was due to asphyxia from lung disease, thus practically avowing that they could not place reliance upon Mr. Mackay's version of the facts and consequently upon his opinion. Mr. Mackay was charged at the South-Western police-court with committing wilful and corrupt perjury, the Treasury prosecuting. Mr. Plowden, the presiding magistrate, treated Mr. Braxton Hicks who detailed the circumstances of the inquest with scant courtesy, we might even say with contemptuous badinage. This was unworthy of the learned magistrate seeing that by virtue of his office Mr. Braxton Hicks has statutory magisterial powers. We do not agree with Mr. Plowden that the proceedings at the inquest were "eccentric" or that "all the ordinary landmarks in a court of justice were absent." A coroner's court is one of first instance and procedure therein is not ruled by the inflexible regulations as to the admission of evidence prevailing in a stipendiary's court. We assert that Mr. Braxton Hicks did not ask for two verdicts, for the request which he preferred to the jury before calling Mr. Kempster and Dr. McManus was simply a means of ascertaining the impression made upon the minds of the jury by Mr. Mackay's evidence. Mr. Braxton Hicks knew what Mr. Kempster and Dr. McManus would swear to, and rightly, in our judgment, he sought to emphasise what he regarded as a gross dereliction of duty. Mr. Plowden in discharging the case described it as a question of divergent medical opinion, but Mr. Mackay was charged with perjury—that is, with falsely swearing as to facts. For the purpose of the prosecution it did not matter one iota whether the medical witnesses were agreed in opinion or not. The real point at issue was whether Mr. Mackay had performed the post-mortem examination properly and, if not, whether he had sworn that he had. We do not hesitate to say that if the testimony of Mr. Kempster and Dr. McManus was reliable perjury was undoubtedly committed. We hold that Mr. Braxton Hicks was in duty bound to take the course he did. It was all nonsense for Mr. Plowden to say that because all the organs should have been examined "if the child

died from fracture of the brain it is the duty of the doctor to inspect the toes." Were such a statement made by counsel and not by a judge we should consider it as constituting an abuse of advocacy. It is of the highest importance that medical men should carry out with exactitude and integrity post-mortem examinations which are required in order that the cause of death may be ascertained. Neglect to do this might lead to serious failure of justice and would weaken a necessary safeguard to the community.

WITH the consent of Lord Kitchener a ward is to be endowed in the new Gordon Hospital at Khartoum in memory of the late Mr. T. W. M. Longmore, M.R.C.S. Eng., L.R.C.P. Lond., who was well known during the last ten years to travellers and invalids wintering in Egypt where he practised first on Messrs. Cook's Nile steamers and later at Luxor, in which place in addition to private practice he had charge of the Luxor hospital for natives. No more suitable memorial could have been chosen, as Mr. Longmore took the keenest interest in the question of hospital accommodation for sick natives. His personality was so charming that he made hosts of friends and the subscription list has already been liberally responded to, but the committee require to raise £500. The honorary secretary of the fund in this country is Dr. Barry Blacker, 15, West Eaton-place, to whom subscriptions should be sent.

IN the December number of the *Middlesex Hospital Journal* is a life-like reproduction from a portrait of Dr. Sidney Coupland by the mezzotinto-like process of the Swan Electric Engraving Company. As most of our readers know, Dr. Coupland has had to sever his connexion with the Middlesex Hospital in consequence of his appointment to the post of a Commissioner in Lunacy. It is fitting that the hospital which he has so long and honourably served should issue this portrait as a frontispiece to its *Journal* and as an embellishment to an appreciatory note which concludes: "We wish him a long and very happy career in his new field and feel sure that he will never forget nor lose interest in his many Middlesex friends, who certainly will never forget nor lose interest in their beloved and honoured teacher and colleague."

THE Council of the Royal Institute of Public Health have awarded the Harben Gold Medal for 1899 to Lord Lister, P.R.S., in recognition of his eminent services to preventive medicine; and they have appointed Professor William R. Smith, M.D. Aberd., D.Sc., F.R.S. Edin., as Harben Lecturer for the year 1899, who has chosen as the subject for his lectures "Diphtheria." We hope Professor Smith, who is medical officer to the London School Board, will explain his position as an unbeliever in the influence of the schools in the dissemination of diphtheria.

SIR GEORGE BIRDWOOD has retired from the India Office after a service period of more than forty years. He is best known for his extensive knowledge of the arts and crafts of India and for his organisation of various exhibitions, and we are glad to say that although he has retired the country will have the benefit of his services with regard to the forthcoming exhibition at Paris to be held next year. Sir George Birdwood is an M.D. of Edinburgh and has held important medical and scientific professorships at the Grant Medical College, Bombay.

ON the occasion of the jubilee of the St. Petersburg Academy of Medicine the following British medical men have been appointed honorary members of the Academy: Sir William Mac Cormac, Sir William Turner, Sir William Stokes, Dr. Thomson, Dr. Macewen, and Dr. Lauder Brunton. Lord Rayleigh received the same honour.

MR. THOMAS TOWNSEND BUCKNILL, Q.C., who has been appointed a Judge of the High Court in the room of Sir Henry Hawkins resigned, is the second son of the late Sir J. C. Bucknill, M.D. Lond., F.R.S., of East Cliff House, Bournemouth, well known as a psychologist and as a pioneer of the volunteer movement.

SIR SQUIRE BANCROFT will tell the story of Charles Dickens's "Christmas Carol" at St. Martin's Town Hall on Thursday afternoon, Jan. 12th, at 3 o'clock, in aid of the Royal London Ophthalmic Hospital. Tickets can be obtained from the Secretary, Royal London Ophthalmic Hospital, Moorfields, E.C.

THE Inebriates Act, 1898, came into operation on Jan. 1st, 1899. It is stated that circulars will be issued from the Home Office to explain the objects of the Act. We hope in a future issue to deal at length with this important subject.

THE January number of the *Quiver* contains an article on Great Anniversaries in January by the Rev. A. R. Buckland and among the calendrical reminiscences is a note on the establishment of the Hospital Sunday Fund. The author calls to mind the fact that "From the year 1869 to the year 1872 the late Dr. James Wakley, Editor of THE LANCET, urged the establishment of such a fund; but it was not until Jan. 16th, 1873, that the meeting which gave birth to the movement was held in the Mansion House. Sir Sydney Waterlow was Lord Mayor that year and he became the first treasurer and president of the Fund." The note is accompanied by a capital likeness of the late Dr. James Wakley and also by one of Sir Sydney Waterlow.

SIR JAMES REID, Bart., K.C.B., has been appointed by the Prince of Wales a Physician-in-Ordinary to His Royal Highness, vice Sir William Jenner, Bart., G.C.B., recently deceased.

LADY CURZON of Kedleston is to become the President of the Marchioness of Dufferin's fund for providing medical aid for the women of India.

THE North London Hospital for Consumption and Diseases of the Chest has received a donation of £3000 from "A Lady."

A SPLENDID New Year's gift has been received by the committee of the Bromley (Kent) Cottage Hospital, in the shape of a donation of £4000 for the endowment in perpetuity of the "Jamie Wheeler-Bennett" children's ward of the hospital. The gift is from Mr. J. Wheeler Bennett of Ravensbourne, Keston, Kent, a member of the committee of the hospital, and already one of the most liberal supporters of this and other charities in the neighbourhood. The ward has accommodation for 8 children's cots and with the growing demands on the accommodation of the hospital this provision for the children's ward will be a great relief to the committee who have a large institution of 32 beds in all to maintain, being the largest institution of its kind in the kingdom.

FATAL ACCIDENT.—Mrs. Bowen-Jones, the wife of Mr. L. M. Bowen-Jones, the medical officer of health of the Carmarthen Combined Rural Districts, was thrown out of a carriage on Christmas Day and fractured the base of her skull. She died the same evening. At the inquest a verdict was returned in accordance with the evidence and a vote of sympathy with Mr. Bowen-Jones was passed.

THE LANCET
Analytical Commission
ON
SOME LEADLESS GLAZES.

LEAD poisoning in the potteries proceeds apace, and must do so until, as we have remarked before in these columns,[1] the Home Office takes one of two courses—either prohibits the use of raw lead, or by suitable regulations makes the introduction of harmless glazes a paying or practicable affair for the manufacturer. How urgently prompt and effective legislative action is needed is evident when we consider that under the new Act of 1895 the returns for the year 1896 showed 387 cases of lead poisoning from the potteries, and further statistics show a decided increase upon this number. English pottery work and English pottery products stand first in the world. It is a terrible stigma, however, upon this position that in some branches at least this excellence is attained at the expense of so much human suffering.

The seat of the mischief, as everyone knows, is lead, and the question to be decided is whether raw lead can be made harmless, or dispensed with altogether. To make raw lead harmless it has been suggested to fuse it first with borax, silica, &c.—a process technically termed "fritting"—but clearly this preliminary precaution involves the handling of raw lead in the preparatory stage. The risk, however, of lead poisoning would be thus considerably lessened where it now most occurs—that is, in the cases of those whose business it is to grind the "frit" into powder and to dip the ware in the glaze subsequently prepared. The lead in a "frit" is much less soluble in the gastric juice than is raw lead and the evil effects of absorption of lead during both the grinding and dipping processes would be largely avoided by the adoption of "fritted" lead.

In an article published in THE LANCET of May 14th, 1898, we had occasion to sum up the opinions of manufacturers as to the practicability of substituting "fritted" lead for raw lead and the balance of opinion seemed to be decidedly in favour of the former. Amongst these opinions the following are worthy of observation. "'Fritted' lead is as consistent with practical pottery as using the lead as in the raw state; it is an easier flux than raw lead and can be used universally without injury to the trade; it does better for colours and increases the brilliancy of the ware; and, finally (according to the evidence of an employé in one of the largest pottery firms), not a single case of lead poisoning had been known where all the lead was 'fritted.'"

We next turn to the possibility of doing away with lead altogether. Obviously, could this be done without interfering with the peculiar and delicate requirements of the art of glazing we might confidently hope for a speedy and satisfactory solution of a very difficult question. An enormous number of laborious experiments have been made on this promising side of the subject, with the result we may hope that the introduction and adoption of practicable leadless glazes will become before long an accomplished fact. But obviously nothing short of the evidence of experience can be expected to satisfy the industry on all points. As a small, though we think encouraging and instructive, contribution to the question we now offer the results of some experiments which we ourselves have made with certain leadless glazes in THE LANCET Laboratory during the last month. We cannot, of course, lay claim to the possession of practical knowledge or judgment in this matter. Our interest in the question is necessarily a limited one, but it is a vital interest, the points at issue affecting the well-being of those engaged in a beautiful but at present dangerous art.

Our attention was recently drawn to the important results of a great number of arduous experiments directed to the practicability of producing leadless glazes which were undertaken by one who has spent much of his time in the potteries and who has an extensive practical acquaintance with the industry. These results have been published by the author,[2] Mr. William J. Furnival, the failures as well as successes being wisely recorded. Some of the successes are illustrated in specimens placed on view, by permission of the Science and Art Department in the Geological Museum in Jermyn-street. By the courtesy of Mr. Furnival we have obtained some specimens of the glaze and of the wares finished by its means. They consisted of various types, such as saucers, cheese-plates, dessert-plates, plaques, &c., all of which we have examined, tested, and submitted to experiment.

No. 1 was a leadless glaze marked No. 2855 and described as having been used in the dipping of all the samples of ware marked 2855. Examined for lead this glaze gave absolutely negative results. Borax was an important constituent. When tried on "biscuit" in the oxyhydrogen flame a clear uniform glaze resulted.

The second specimen was a saucer one half of which was glazed with lead glaze and the other half with leadless glaze. This appeared to us to be a perfectly successful demonstration of the practicability of using leadless glaze. In appearance the leadless glaze was in every way as good as the lead glaze. Careful chemical tests showed the presence of lead in the one case and the absence of lead in the other.

The specimen taken as a third example was a dessert-plate with coloured pattern and gold border. The glaze was excellent and was free from lead.

These examples will suffice, but we may add that we have examined and tested in all fourteen pieces[3] with satisfactory results. The lead was tested for in two ways. First, on a portion of the plate a mixture of carbonate of soda and potash was fused before the flame of a powerful blowpipe. The melted mass after cooling was washed off in hot dilute hydrochloric acid and sulphuretted hydrogen was passed through the solution. There was never any indication of lead in the glazes marked "leadless." As a check on this test the plate was afterwards sprinkled with powdered fluorspar and moistened with strong sulphuric acid and gently warmed. The glaze was thus attacked by the hydrofluoric acid generated and the lead, if present, would be liberated from the flux. The plate was next flooded with water and sulphuretted hydrogen was passed through the liquid. This test answered very well with ordinary lead glazed ware but in no case gave any positive response with the leadless glazed ware so described and placed at our disposal by Mr. Furnival.

We consider that these results are of the utmost importance for they indicate the probability of satisfactorily substituting absolutely leadless glaze for the old lead veneer without detriment to the beauty and finished appearance of the product. It seems to us, therefore, that the ground should be perfectly clear for action by the Home Office. Either leadless glazes are practicable or they are impracticable. It is for a committee of experts to decide one way or the other with the evidence of practical trial before them. There is no proprietary right whatever connected with the use of these glazes. Their formulæ are published and fair practical trial and criticism are invited. We understand that already some large pottery manufacturers and others with a considerable experience of the industry have tried these leadless glazes on a practical scale with excellent results.

It may be hoped, then, that the day is not far distant when the Government will be in a position to demand the abolition of raw lead in glazing and to compel the adoption of safe "frits" or, better still, leadless glazes, without inflicting any hardship on the potter or causing any hindrance to the pursuit of his art. The alternative is to bring lead poisoning under the Workmen's Compensation Act.

THE LANCET Laboratory.

[1] THE LANCET, Nov. 19th, 1898.

[2] This book ("Researches on Leadless Glazes") was reviewed in THE LANCET of Nov. 19th, 1898.

[3] We shall be pleased to show these specimens as tested in THE LANCET Laboratory to those of our readers who are interested in the subject and who for that purpose will kindly write to us requesting an appointment.

THE METROPOLITAN WATER-SUPPLY: THE PROPOSED BATTERSEA INTER-COMMUNICATION SCHEME.

IN October, 1897, the engineers of the metropolitan water companies proposed a scheme to make interchangeable connexions between the mains of the several companies. This scheme was submitted to Lord Llandaff's Commission. At a meeting held on Oct. 24th of the present year by the engineers of the metropolitan water companies a second report was made and a new scheme was drawn up. This is

called Scheme No. 2. Sir Henry Knight, chairman to the Southwark and Vauxhall Company, in giving his evidence proposed a scheme differing somewhat from both the schemes just mentioned. This is called Scheme No. 3. The second scheme is the one which is here described. A diagram is given showing the proposed trunk mains. The scheme will be best understood by a study of this map in

PLAN SHOWING PROPOSED TRUNK MAINS TO BE MADE IN THE "BATTERSEA SCHEME (No. 2)."

Nos. 1, 2, 3, and 4 are the proposed new trunk mains for the supply of water from the Southwark and Vauxhall Company's Battersea station. The figures in brackets give the capacities of the reservoirs in gallons. The figures immediately under the names of the reservoirs give the height in feet above Ordnance datum at which the reservoirs are situated.

connexion with the evidence given by Mr. Collins of the outline of the scheme. Mr. Collins's evidence, given at the thirty-fifth sitting of the Royal Commissioners, was as follows:—

"The idea is to take the Battersea works as a centre. These works are capable of filtering 15,000,000 gallons a day with pumping power for 25,000,000 gallons a day. That being the case it would be possible by the running of certain mains to make a distribution between all the companies which would be available not from any one company to any other company, but from all the companies to any one company. That would necessitate the laying of certain mains. If you will refer to the plan attached to the scheme you will see there is a main put down as No. 1. That is the line between Battersea and Campden-hill. That is what we call No. 1 connexion, and that would enable water in the first instance to be taken from Battersea to Campden-hill direct. That main would be the means of assisting the Grand Junction Company to a quantity equal to 10,000,000 gallons per day from Battersea, and would also be available for passing water back from Campden-hill to Battersea in case the assistance is required for other companies. No. 2 connexion upon the plan consists of a main between the Campden-hill reservoir and the New River head. That main is already partially laid. No. 2 connexion, which would enable the Grand Junction Company to pass water from their Campden-hill reservoirs into the New River, would be for the assistance of the New River Company; and at the same time it could receive assistance from Battersea into Campden-hill, so it would be a circulation round from one company to another. Then, again, for the assistance of the New River Company it is suggested that main No. 3 should be laid. That would enable the Southwark and Vauxhall Company to pass 10,000,000 gallons a day through to the New River Company. No. 4 main would enable the Battersea centre to deliver water to Brixton; and No. 5 main is the main which is already partially made under the river and would enable the Southwark and Vauxhall Company, without interference with the present supply, to give a suitable quantity to the East London Company. With these means of connexion as set forth in what we call No. 2 scheme a complete circuit of connexions is formed—that is, a system by which almost 20,000,000 gallons a day can be provided for any one company in case that company is in trouble in case of an emergency. We have set forth in this No. 2 report a list of the mains and connexions which we say might be made. We do not bind ourselves that this is the only scheme that might be adopted; it is subject to alteration if necessity requires. After those connexions we give you the proposed quantity of water that could be delivered to any one company from the different sources. We take first of all the Chelsea as the receiving company, and we say that through the main No. 1 we could by making a connexion pass water to the Chelsea Company either from Battersea or from Campden-hill. Assistance could be rendered to this company, we say, through connexions with main No. 1."

The details of the scheme are as follows. The trunk mains which will have to be made are:—

No. 1. A 30 in. main from Battersea Works to Campden-hill, about 6380 yards in length.

No. 2. A 24 in. main from Campden-hill to Poland-street, about 5100 yards.

No. 3. A 30 in. main from Battersea Works to the "Angel," Islington, in connexion with the New River Company's Crouch-hill system, about 8800 yards (providing for duplication across the Thames).

No. 4. A 30 in. main from Battersea Works to Brixton-hill, about 3960 yards.

No. 5. A 30 in. main from Nunhead reservoir to the Tower subway, about 5700 yards.

No. 6. A 21 in. main from Hammersmith to Campden-hill to enable the West Middlesex Company to deliver 3,000,000 gallons per day into Campden-hill reservoir.

No. 7. A 24 in. main, about four miles in length, to enable the Grand Junction Company to deliver 3,000,000 gallons per day extra into Campden-hill reservoir.

The following connexions would also have to be made:—

1. A connexion between the West Middlesex Company's main in the vicinity of Campden-hill and the Grand Junction Company's Campden-hill reservoir.
2. A connexion at Raynes Park between the 42 in. main of the Southwark and Vauxhall Company and the two 30 in. mains of the Lambeth Company.
3. A connexion at Leigham Court-road, Streatham, between the 21 in. main of the Lambeth Company and the 42 in. main of the Southwark Company.
4. A connexion at Kennington-gate between the 20 in. and 24 in. mains of the Lambeth Company and the 30 in. and 24 in. mains of the Southwark Company.
5. A connexion at Manor-park, Streatham, between the Streatham works of the Southwark Company and the 12 in. main of the Lambeth Company.
6. A connexion between the 12 in. main of the Lambeth Company in Park-road, Forest-hill, and the 12 in. main of the Kent Company in High-street, Lewisham.
7. A connexion between the 12 in. main of the Lambeth Company at Beckenham and the 12 in. main of the Kent Company at Shortlands.
8. A connexion at Peckham between the 16 in. main of the Kent Company and the 20 in. main of the Southwark Company.
9. A connexion at Upper Richmond-road, Putney, between the 24 in. main of the Chelsea Company and the 30 in. and 36 in. mains of the Southwark Company.
10. A connexion at London-road, Kingston, between the 42 in. main of the Southwark Company and the 30 in. and 24 in. mains of the Chelsea Company.
11. A connexion at Surbiton between the 30 in. main of the Lambeth Company and the 30 in. main of the Chelsea Company.
12. A connexion at Kingston-hill between the two 12 in. mains of the Lambeth Company and the 30 in. and 15 in. mains of the Chelsea Company.

The following connexions which already exist would also be utilised:—

1. A connexion by which the Grand Junction Company can pump directly into the mains of the East London Company and *vice versâ*.
2. An arrangement by which water can be delivered by the East London Company to the New River Company from their 30 in. main in Seven Sisters-road into the New River.

The proposed mains of intercommunication would approximately be as follows:—

RECEIVING COMPANY—THE CHELSEA.

	Gallons per day.
Assistance could be rendered to this company through connexions with Trunk Main No. 1 crossing 24 in. mains of the Chelsea Company, by which water could be delivered from the Battersea centre to the extent of...	10,000,000

Failing this, 10,000,000 gallons could be delivered from Campden-hill by means of these connexions, the Grand Junction Company contributing 3,000,000 gallons, the West Middlesex Company 3,000,000, and the New River Company 4,000,000.

Further assistance could be rendered to the Chelsea

Company by connexions Nos. 9, 10, and 11, which provide for an interchange of water between the Southwark and Chelsea and Lambeth and Chelsea Companies.

RECEIVING COMPANY—EAST LONDON.

Assistance could be rendered to this company as follows:—

	Gallons per day.
From the New River Company at Lee intake ...	6,000,000
From the Grand Junction Company, 3,000,000 gallons, and from the West Middlesex Company, 3,000,000 gallons; total delivered at New River Head to be passed on to East London Company by Lee intake	6,000,000
From the Southwark Company per Tower Subway Trunk Main No. 5 supported from Battersea centre	8,000,000
Total	20,000,000

Further assistance could be rendered to the East London Company by the existing connexion with the Kent Company at Blackwall to the extent of 500,000 gallons per day.

The Chelsea and Lambeth Companies, in the event of failure of the foregoing proposals, by means of connexions Nos. 9, 10, 2, 3, 4, and 5 could assist the Southwark Company, which in turn could assist the East London Company with water so provided.

RECEIVING COMPANY—GRAND JUNCTION.

Assistance could be rendered to this company as follows:—

	Gallons per day.
From New River Company per Trunk Main No. 2	6,000,000
From West Middlesex Company	3,000,000
From Battersea centre per Trunk Main No. 1 ...	10,000,000
Total	19,000,000

RECEIVING COMPANY—KENT.

	Gallons per day.
Assistance could be rendered by means of connexions Nos. 6 and 7 from the Lambeth and No. 10 from the Southwark Company to the extent of, say	4,000,000

This in turn could be supplemented from Battersea centre.

RECEIVING COMPANY—LAMBETH.

	Gallons per day.
Assistance could be rendered from Battersea centre per Trunk Main No. 4 to the extent of...	10,000,000
From the Grand Junction Company per Trunk Main No. 1 from Campden-hill direct to Brixton	3,000,000
From West Middlesex Company per Trunk Mains Nos. 1 and 4	3,000,000
From New River Company *via* Campden-hill ...	4,000,000
Total	20,000,000

This could be supplemented from the Chelsea Company by connexions Nos. 11 and 12 and from the Kent Company by Nos. 6 and 7.

RECEIVING COMPANY—NEW RIVER.

	Gallons per day.
Assistance could be rendered to this company from Grand Junction Company per Trunk Main No. 2	3,000,000
From West Middlesex Company per Trunk Main No. 2	3,000,000
From Battersea centre per Trunk Main No. 3 ...	10,000,000
Further assistance could be rendered by the East London Company through the existing connexion with the New River at Seven Sisters-road to the extent of...	4,000,000
Total	20,000,000

RECEIVING COMPANY—SOUTHWARK AND VAUXHALL.

Assistance could be rendered to this company as follows:—

	Gallons per day.
From the Battersea centre	10,000,000
From the New River, West Middlesex, and Grand Junction Companies, per Campden-hill	10,000,000
Total	20,000,000

Assistance could also be given by the Lambeth and Chelsea Companies by means of connexions Nos. 2, 3, 4, 5, 9, and 10.

RECEIVING COMPANY—WEST MIDDLESEX.

Assistance could be rendered to this company as follows:—

	Gallons per day.
From New River Company, per Trunk Main No. 2	6,000,000
From Grand Junction Company	3,000,000
From Battersea centre, per Campden-hill	10,000,000
Total	19,000,000

Further assistance could be given from the New River Company by the existing connexions at Tottenham Court-road and at Euston-road.

Upon the supposition that the Battersea works can be made available, the terms upon which they might be utilised would have to be arranged between the eight confederated companies.

The provision of a 36-in. main from Hampton to Battersea would make Battersea a permanent centre. This main could not be laid before next summer, but the existing one would be sufficient until its completion.

THE MIDWIVES BILL.

THE Memorandum of the new Midwives Bill, which it is intended to introduce into Parliament next Session, runs as follows:—

The chief object of this Bill is to carry into effect the recommendations of the Select Committee of the House of Commons relating to the training and practice of midwives by promoting the training of women as midwives and by providing for the regulation of their practice.[1] This Bill provides that henceforth no woman shall call herself, or habitually practise for gain as, a midwife unless she has obtained a licence, and that, in order to be licensed, she must *inter alia* produce evidence either (1) of having undergone a proper training and subsequent examination, or (2) of having (at the time of the passing of the Bill) been in *bonâ fide* practice as a midwife. The Bill does not render it illegal for any person to render assistance to a lying-in woman in an emergency. A Central Midwives Board is constituted under this Bill whose chief duties will be (1) to organise examinations of a uniform standard; (2) to regulate, supervise, and restrict within due limits the practice of midwives; and (3) to investigate charges of malpractice, negligence, or ignorance against midwives.

The Bill is drafted on the lines of that introduced last year, but the following alterations have been made in view of the requirements of the General Medical Council[2]:—(1) Licensing is substituted for registration; (2) the habitual practice of midwifery for gain by women not licensed under

[1] See Reports of Select Committee on Midwives Registration together with the Proceedings of the Committee, Minutes of Evidence, Appendix, and Index ordered by the House of Commons to be printed June 17th, 1892, and August 8th, 1893.

[2] See report by the committee appointed by the General Medical Council on May 25th, 1898, to confer with delegates from the Midwives Bill Committee, together with an appendix containing a report of the proceedings at the Conference (adopted by the General Medical Council, Nov. 29th, 1898).

this Bill is rendered illegal; and (3) the area within which a midwife may practise is, in order to facilitate supervision, limited to that of the local supervising authority from whom she has obtained a certificate authorising her to practise.

Draft Copy of the Midwives Bill.

A Bill to Promote the Better Training of Women as Midwives and to Regulate their Practice.

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. This Act may for all purposes be cited as the Midwives Act, 1899.

2. In this Act, the term "midwife" means a woman who undertakes for gain to attend women in child-birth. "Midwives Roll" means a roll of midwives kept in pursuance of this Act. "Central Midwives Board" means the Board constituted under this Act for the purpose of carrying out the provisions of this Act.

3.—(1) From and after the first day of January, one thousand nine hundred, no woman shall be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words) or any name, title, addition, or description implying that she is licensed under this Act or is qualified to act as a midwife unless she be licensed under this Act. (2) Any woman who, after the first day of January one thousand nine hundred, not being licensed under this Act, shall take or use the name of midwife or any other such name, title, addition, or description as aforesaid, or shall habitually and for gain attend women in child-birth shall be liable on summary conviction to a fine not exceeding five pounds. (3) No woman shall be licensed under this Act until she has complied with the rules and regulations to be laid down in pursuance of the terms of this Act. (4) The licence under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts or to assume any name, title, or designation implying that she is by law recognised as a medical practitioner or that she is qualified to grant any medical certificate.

4. Any woman who, within two years of the passing of this Act, claims to be licensed under this Act shall be so licensed provided she holds a certificate in midwifery from the Royal College of Physicians of Ireland or from the Obstetrical Society of London or such other certificate as may be approved by the Central Midwives Board, or produces evidence, satisfactory to the Board, of character, and that at the passing of this Act she has been in bonâ-fide practice as a midwife.

5. On the passing of this Act the President of the General Medical Council shall take steps to secure the election of a Central Midwives Board which shall consist of:—(1) Four registered medical practitioners, one to be elected by the Royal College of Physicians of London, one by the Royal College of Surgeons of England, one by the Society of Apothecaries, and one by the Incorporated Midwives Institute; and (2) two persons to be appointed for terms of three years by the Lord President of the Council. After two years from the passing of this Act the elected members shall retire but shall be eligible for re-election annually. Any vacancy occurring by resignation or death shall be filled up in the case of an elected member by the body which elected him, and in the case of an appointed member by the Lord President of the Privy Council. (3) The duties of the Board shall be as follows:—

I.—To frame rules, for approval by the General Medical Council, (*a*) regulating the issue of licences and the conditions of admission to the roll; (*b*) regulating the conduct of qualifying examinations; (*c*) regulating the admission to the roll of women already in practice as midwives at the passing of this Act; (*d*) regulating, supervising, and restricting within due limits the practice of midwives.

II.—(*a*) To appoint examiners; (*b*) to decide upon the places where and the times when examinations shall be held; (*c*) to publish annually a roll of midwives who have been duly licensed under the Act; (*d*) to decide upon the conditions under which midwives may be suspended from practice; (*e*) to decide upon the removal from the roll of the name of any midwife for disobeying the rules and regulations from time to time laid down under this Act by the Central Midwives Board, or for other misconduct, and also to decide upon the restoration to the roll of the name of any midwife so removed; (*f*) to issue licences.

III.—And generally to do any other act or duty which may be necessary for the due and proper carrying out of the provisions of this Act.

6. There shall be payable by every woman presenting herself for examination or licence such fees as the Central Midwives Board may, with the approval of the General Medical Council, from time to time determine. All fees paid by existing midwives and by candidates for examination shall be paid to the Central Midwives Board. The said Board shall devote such fees to the payment of expenses connected with the examination and licence and to the general expenses of the Board. Should these fees not equal the expenditure of the Board the deficiency shall be supplied from the respective local administrative county funds in proportion to the number of licensed midwives in the said county.

7. There shall be a Midwives Roll containing: (1) the names of those midwives practising at the date of the passing of the Act who have been licensed to practise under the Act; (2) the names of those not already in practice as midwives at the passing of the Act but who have been licensed to practise under the Act. The entry on the roll shall in every case indicate the qualifications in virtue of which the licence was granted.

8. The Central Midwives Board shall appoint a secretary who shall be charged with the custody of the roll. A copy of the midwives roll for the time being shall be evidence in all courts that the women therein specified are licensed according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not licensed according to the provisions of this Act. Provided always that in the case of any woman whose name does not appear in such copy a certificate under the hand of the secretary of the entry of the name of such woman on the roll shall be evidence that such woman is licensed under the provisions of this Act.

9. Every administrative county council throughout England and Wales shall, on the passing of this Act, appoint its medical officer of health or other registered medical practitioner or practitioners, as the local supervising authority over midwives within the area of the said county. It shall be the duty of the local supervising authority: (1) To exercise general supervision over all midwives practising within the prescribed area in accordance with the rules to be laid down under the provisions of this Act. (2) To investigate charges of malpractice, negligence, or misconduct on the part of any midwife practising within his district, and if he consider that a *prima facie* case is established to report the same to the Central Midwives Board. (3) To suspend any midwife from practice, in accordance with the rules to be laid down by the Central Midwives Board, if he considers such suspension necessary to prevent the spread of infection. (4) To report at once to the said Board the name of any midwife practising in his district convicted of a misdemeanour or felony. (5) During the month of January of each year to supply the secretary of the Central Midwives Board with the names and addresses of all midwives practising in his district and to keep a current copy of the midwives roll accessible at all reasonable times for public inspection. (6) To report at once to the Central Midwives Board the death of any midwife or any change in the name or address of any midwife in his district so that the necessary alteration may be made in the roll.

10. A woman who holds herself out as a practising midwife in any administrative county shall obtain from the local supervising authority a certificate enabling her to practise therein, which certificate shall be granted on proof by the woman that her name is on the midwives roll. The certificate shall remain in force till the thirty-first of December following, and shall be revocable at any time by the local supervising authority in case the holder be proved, to the satisfaction of the Central Midwives Board, to have infringed any of the regulations framed under this Act. The certificate shall be renewed annually in the month of January. It shall be issued free of charge and shall only be available in the county for which it is issued.

11. (*a*) Any woman who procures or attempts to procure a licence by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein, shall be deemed guilty of a misdemeanour, and shall on conviction thereof be liable to a fine not exceeding £5, or to be imprisoned, with or without hard labour, for any term not exceeding two months. (*b*) Any woman who, after the first day of January, one thousand nine hundred, shall hold herself out as a practising midwife or shall practise in any administrative county without having previously obtained from the local supervising authority a certificate enabling her to practise therein shall be deemed guilty of a misdemeanour and shall, on conviction thereof, be liable to a fine not exceeding two pounds or to be imprisoned, with or without hard labour, for any term not exceeding one month. (*c*) But a midwife shall not be guilty of a misdemeanour under this section by attending, on an emergency, a woman in childbirth in a county other than that for which she holds a certificate; provided she has within a reasonable time given notice of having so acted to the local supervising authority of that county.

12. Any person appointed to keep the roll of midwives, wilfully making or causing to be made any falsification in any matter relating to the roll of midwives shall be deemed guilty of a misdemeanour and shall be liable to a fine not exceeding ten pounds, or to be imprisoned with or without hard labour for any term not exceeding three months.

13. Any offences under this Act punishable on summary conviction may be prosecuted, and any fine under this Act recoverable on summary conviction may be recovered, in manner provided by the Summary Jurisdiction Acts. The expenses of any prosecution shall be defrayed out of the funds of the county in which the prosecution takes place.

14. (1) An appeal shall be allowed to the Privy Council should any disagreement arise between the General Medical Council and the Midwives Board respecting the carrying out of the provisions of the Act or of any of them; (2) where any woman deems herself aggrieved by any order, conviction, judgment, or determination of or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

15. Nothing in this Act respecting midwives shall apply to legally qualified medical practitioners.

16. This Act shall not extend to Scotland or Ireland.

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

THE Honorary Secretaries of this Fund have kindly forwarded to us the following report of the Prince of Wales's Hospital Fund for the year:—

With the approval of His Royal Highness (the President) the operations of the Fund have this year been limited to those hospitals lying within a radius of seven miles from Charing-cross which applied for a grant within the stated time in answer to the advertisement inserted in the metropolitan journals. In the preliminary consideration of these applications the Visiting Committee received great help from the Central Hospital Council for London. Of those hospitals which applied and whose claims were considered all but 12 received grants. Of these 12 some were deemed by their existing income and by the grants already received from the Sunday and Saturday Funds to be this year adequately provided for. Others, though excellent institutions, did not appear to be hospitals in the strict sense; a few more were, by reason of their management, ruled to be undeserving of support. The 100 dozen pints of champagne presented by Messrs. Charles Heidsick have been stored by Messrs. Thomas Trapp and Sons, who have undertaken to deliver them to the various hospitals free of cost. This wine is divided among the hospitals receiving grants

approximately in proportion to the number of beds occupied, exclusive of pay beds. The details of the grants for this year are appended below:—

Grants Recommended by the Distribution Committee.

Name of Hospital.	Grant. Annual.	Donation.
	£	£
[1] London Hospital	5000	—
[1] Guy's Hospital	5000	—
[1] St. Thomas's Hospital	1800	—
[1] Middlesex Hospital	1000	—
[1] St. Mary's Hospital	1000	—
[2] King's College Hospital	1000	475
[3] Westminster Hospital	750	—
[3] University College Hospital	1400	—
[3] Charing-cross Hospital	1000	—
[3] Royal Free Hospital	750	—
[3] Seamen's Hospital	500	—
[4] Hospital for Consumption, Brompton	—	500
[3] Hospital for Sick Children, Great Ormond street, W.C.	500	—
[5] City of London Hospital for Diseases of the Chest, Victoria-park, E.	1000	—
[3] National Hospital for the Paralysed and Epileptic	750	—
Metropolitan Hospital	—	500
[6] Great Northern Central Hospital	750	—
German Hospital	—	150
[7] London Temperance Hospital	—	500
[8] West London Hospital	—	500
French Hospital	—	100
West Ham Hospital	—	250
North-West London Hospital	—	300
Mildmay Mission Hospital	—	250
[9] Bolingbroke Hospital	—	250
Miller Hospital	—	200
Memorial Cottage Hospital	—	50
[10] Establishment for Gentlewomen, Harley-street	—	75
St. Saviour's Hospital, Osnaburgh-street	—	50
Royal Hospital for Diseases of the Chest, City-road	—	100
[11] North London Hospital for Consumption	1000	—
[12] East London Hospital for Children	—	250
Alexandra Hospital for Children	—	500
[13] North-Eastern Hospital for Children	—	250
Paddington-green Hospital for Children	—	150
Royal Hospital for Children and Women	—	100
[14] Samaritan Free Hospital	—	500
[15] Grosvenor Hospital for Women and Children	—	100
Hospital for Women, Soho-square	—	350
Chelsea Hospital for Women	—	300
Queen Charlotte's Hospital	—	300
British Lying-in Hospital	—	50
[16] Royal London Ophthalmic Hospital	—	450
[17] London Lock Hospital (Female)	—	500
St. Peter's Hospital for Stone	—	50
London Homœopathic Hospital	—	200
Total	23,200	8,300

COMMITTEE'S RECOMMENDATIONS.

[1] The Committee recommend that the grant be made on the same conditions as last year's.

[2] The Committee recommend that the annual grant of £1000 be continued and that a special grant of £475 be made towards reflooring the wards.

[3] The Committee recommend that the annual grant be continued on the same conditions as last year's.

[4] The Committee recommend that this grant be made towards the cost of the proposed country branch and convalescent home on condition that the balance of the estimated cost is provided and the work put in hand without any avoidable delay.

[5] The Committee recommend that this grant be made in order to provide for the reopening of 15 of the 60 beds now closed.

[6] The Committee recommend that this grant be made on condition that 15 of the 25 beds now closed are opened.

[7] The Committee recommend that this grant be made on condition that the further sum necessary to open the closed ward (12 beds) is raised and the ward opened.

[8] The Committee recommend that this grant be made in the expectation that the overcrowding in the old wards will be abolished and that the suggestions of the Visitors be communicated to the hospital authorities.

[9] The Committee recommend that this grant be made towards the cost of a new accident ward on condition that the balance of the estimated cost is provided and the work put in hand without any avoidable delay.

[10] The Committee recommend that this grant be made only on the understanding that a properly constituted committee is elected forthwith.

[11] The Committee recommend that this grant be made on condition that 15 out of the 20 beds now closed are opened.

[12] The Committee recommend that this grant be made towards a new operating theatre.

[13] The Committee recommend that this grant be made in anticipation of improvements being made in the directions indicated by the Visitors.

[14] The Committee recommend that attention be called, in making the grant, to the overcrowded state of the out-patient department, and that the suggestion be made that it might temporarily be remedied by the children as out-patients being referred to children's hospitals.

[15] The Committee recommend that attention be called in making this grant to the high cost per in-patient per week.

[16] The Committee recommend that attention be called in making this grant to the substance of the Visitors' recommendations.

[17] The Committee recommend that this grant be made on the understanding that the amount necessary for the reconstruction of the drainage of the hospital be provided and the work put in hand without any avoidable delay; and that the overcrowding in wards Nos. 1, 5, 7, 8, 9, and 10 reported by the Visitors be abolished.

Grants Recommended by Convalescent Hospitals Committee.

Metropolitan Convalescent Institution, 32, Sackville-street, Piccadilly, W.	£200
Morley House Seaside Convalescent Home, St. Margaret's Bay, Dover	200
Mary Wardell Convalescent Home, Stanmore, Middlesex	100
Royal Sea-Bathing Hospital, Margate	100
Charing-cross Hospital, Convalescent Home at Limpsfield	50
Chelsea Hospital for Women, Convalescent Home at St. Leonard's-on-Sea	50
East London Hospital for Children, Convalescent Home being erected at Bognor	50
King's College Hospital, Convalescent Hospital, Hemel Hempstead	50
Middlesex Hospital, Convalescent Home at Clacton-on-Sea	50
National Hospital for Paralysed and Epileptic, Convalescent Home at East Finchley	50
Queen Charlotte's Hospital, Convalescent Home at Kilburn	50
Metropolitan Hospital, Convalescent Home at Cranbrook	25
Paddington Green Children's Hospital, Convalescent Home at Harrow	25
	£1,000

Summary.

Grants to Hospitals	£31,500
Grants to Convalescent Hospitals	1,000
Grand Total	£32,500

Thus the £32,500 distributed this year is shared by 59 hospitals and convalescent homes. The result is that in addition to supplying other specified needs 57 more closed beds will be reopened, making with 185 reopened last year in all 242 closed beds not only reopened but maintained through the Fund.

THE BATTLE OF THE CLUBS.

MEDICAL AID ASSOCIATIONS AND PROFESSIONAL SWEATING.

FOR about six months clubdom in Wigan has been agitated to some extent owing to the action of the Medical Guild. Before the Workmen's Compensation Act came into operation the members of the guild unanimously adopted the following rules:—

1. That no member of the guild shall attend trade accidents in connexion with friendly society sick clubs. By "trade accident" is meant "any injury sustained by a workman whilst following his usual occupation."

2. That the minimum fee for attendance on any sick and accident clubs shall be 5*s.* per head per annum—i.e., 2*s.* 6*d.* for sickness and 2*s.* 6*d.* for accident.

3. That the fees charged for examination and report in cases proceeding to arbitration under the Workmen's Compensation Act, 1897, be the same as allowed by the Treasury.[1]

4. That the minimum fee for a preliminary report upon any accident under the Workmen's Compensation Act, 1897, be 1 guinea.

These rates are surely low enough, yet we find that some of the friendly societies took exception to this, although they generally admitted that the miner had made provision for his accidents in the Lancashire and Cheshire Miners' Permanent Relief Society. Several meetings have been held and a deputation met the council of the Medical Guild asking that the circular containing the rules above mentioned should be withdrawn, but the Medical Guild being conscious of the fairness of the terms mentioned in the rules resolved unanimously

[1] See THE LANCET, April 23rd, 1898, p. 1138.

to abide by their decision. Now they are threatened with the establishment of a medical aid association in the town and the societies interested have issued a report in which they conclude "that should a medical association be instituted it will confer a lasting benefit on the friendly societies in the district." Added to this are extracts from balance-sheets of similar societies and these are interesting and certainly demand the careful consideration of the profession if not of the General Medical Council itself. It is deplorable after the cost and the time spent in a medical education that men can be found to take such appointments. The balance-sheet of the Warrington Association for the year 1897 showed twenty-five societies with a total membership of 3265. The income was from all sources £547 15*s.* 11*d.* The expenditure for the same period was £551 13*s.* 7½*d.*, thus showing a deficiency of £3 17*s.* 8½*d.* This was accounted for by extraordinary expenditure, such as paving the street, £24 9*s.*; replacing surgery chairs, £5 7*s.* 3*d.* The previous year there was a profit of £23 7*s.* 4*d.* Now for the interesting portion. The medical officer who has seen ten years' service received with allowances £231 6*s.* and for this he paid 4694 visits and gave 15,988 prescriptions, the average number per day being 44, including Sunday. Now, the money value works out at 11*s.* 8$\frac{1}{11}$*d.* per day and 3$\frac{5}{11}$*d.* per prescription, with the visits thrown in. Can this be termed anything else than "sweating"? The Preston Association for the year ending Dec. 21st, 1896, gives a balance on the year's working of £28 10*s.* 10½*d.* The medical salaries were £385 12*s.* 4*d.*; probably this includes the dispenser. During the year 11,878 prescriptions were dispensed, 13,064 attendances were made at the surgery, 5136 visits were paid, and 32 confinements were attended and 18 vaccinations. The Preston Medical Aid Association is worth £1296 14*s.* The Manchester Association employs three surgeons and pays them £459 7*s.* 6*d.*, equal to £153 2*s.* 6*d.* each, and has a balance to the good of £119 10*s.* 9½*d.* on the year's working. Now if a new medical aid association is to be formed on lines similar to these surely the profession will be found to contain men who are honourable enough to uphold its dignity as well as their own and who will refuse to be sweated by a combination of societies which refuses fair terms to their medical officers. The "sixpenny dispensary man" is looked down upon and practically ostracised by his professional neighbours, but what can a medical man who is the servant of a lay committee expect when he is selling his services at a less sum than the man with an independent dispensary?

PUBLIC VACCINATORS OF THE STAINES UNION.

MR. C. DWIGHT MORRIS, the medical officer of health of the Staines Union, recently called a meeting of all the public vaccinators in his union to discuss the provisions of the new Vaccination Act. At this meeting, which all the public vaccinators in the district attended, it was unanimously resolved that they would be prepared to accept the following scale of fees which they trusted their board would agree to:—

Article 3, General Orders.—Sub-section (*a*), 2*s.* 6*d.*; sub-section (*b*), 6*s.*; and sub-section (*c*), 2*s.* 6*d.* That the postage as before be paid by the board—i.e., the various forms be stamped as before. The arrears cases to be subject to special arrangement as there appears to be no definite provision made for these (the Act dealing with cases registered after August 31st, 1898).

The public vaccinators arrived at the above conclusions after mature deliberation on the great difference in the character of the work as performed by them under the old contract and that required to be performed under the new regulations, which is roughly shown in the following scheme. The above scale is only slightly over the minimum as fixed by the Local Government Board; thus, taking into consideration that it is fully expected that a large number of persons will avail themselves of the conscience clause the actual cost will probably be very much less than under the old compulsory Act.

SCHEME SHOWING DIFFERENCE IN CHARACTER OF WORK TO BE DONE UNDER THE OLD ACT AND THE NEW.

The old regulations.—Stations appointments. Appointments four times a year. To vaccinate. Keep register. Forward accounts to vaccination officer. Only three forms required.

The new regulations.—Receive list from vaccination officer every week (Form H). Issue notices to parents (Form I). Visit and offer to vaccinate between the hours of 9 and 4 any part of the district or at parent's request (Form G). This might necessitate extra visits in an agricultural district like Staines. Return Form H to vaccination officer every month filled in. To keep register. To perform the act of vaccination strictly according to antiseptic conditions and protect with special antiseptic pads. To subsequently attend the child if upset by vaccination free of charge. No less than *ten forms* are now required to carry out the Act—viz., Forms B, C, D, E, F, H, I, O, P, and G. The possibility of being called to attend court to prove visits.

On Dec. 20th, 1898, Mr. Morris appeared before the board of guardians when the fees were unanimously accepted subject to the approval of the Local Government Board. In many districts boards are allowing mileage above the minimum scale, but this, it was considered, would be complex and difficult to adjust.

ASTOUNDING BRITISH ACTION AS TO PLAGUE.

THE news which comes to this country from Calcutta as to the action taken on the East Coast of Africa which is under British jurisdiction, as regards a plague-infected ship, will cause great astonishment, and that feeling will be strongly emphasised by the statement that the action in question has been upheld by the Foreign Office in London. The British India Steam Navigation Company's steamer *Bhandara* was engaged in carrying 1000 coolies from India for the purposes of the Uganda railway and, if report be correct, the authorities at Karachi, the port of departure, took the precaution to examine all the coolies prior to their departure. It is not, however, stated whether the same precautions were taken as regards the crew, concerning whom there is in some ports too much laxity. Twelve days after leaving Karachi the *Bhandara* arrived, on Dec. 27th last, at Kilindini, near Mombasa, and reported seven deaths from plague during the voyage. Here again nothing is as yet stated as to whether the first appearance of the disease was amongst coolies or amongst members of the crew. But peremptory orders were at once issued by the British Governor Sir Arthur H. Hardinge, to the effect that no communication would be allowed with the shore and that the vessel was to return to sea; in brief, an infected vessel was repulsed from British territory and an effort was made to prevent the vessel from getting water at Zanzibar which also comes under British control.

We believe that this action stands unique in modern British sanitary administration. It is in entire violation of everything that England has so long contended for, and, as the Indian Government points out, Great Britain is the first Power to make the Venice Convention a dead letter and hence to lay British shipping open to the same treatment in foreign ports by reason of the precedent she herself has established. The repulsion of an infected vessel has for the last fifty years been condemned in this country as involving distinct cruelty, and in the past it is known to have led to some of the most tragic disasters at sea by reason of the rapid spread of disease amongst those who must remain exposed to infection and because of the lack of food and water on board vessels which had only been provisioned for the purposes of a limited voyage. The story as it is told is too circumstantial for us to doubt the essential facts and we are obliged to admit that we have read it with shame. Our only hope is that in the closing days of the year and during a festive season someone at Whitehall has during a temporary absence of his chiefs blundered by commending that which should have been condemned.

It may, of course, be argued that our East African dominions have not formally accepted the Venice Convention. This is, we expect, true. But if the Home Government commend the greatest possible breaches of that Convention in the case of territories under their direct control what becomes of the pressure which they bring to bear on some of our colonies to become parties to the same Convention? Even if the sick had been left on board the *Bhandara* whilst the healthy had been encamped for nine days on shore the matter would have been better. As the story stands it implies gross neglect and unpreparedness at a British port which is known to have long been in constant relations and communication with plague-infected ports of India; and as regards the actual action taken in the case of the unfortunate vessel with her 1000 coolies and crew it seems to be without a solitary redeeming feature.

THE LANCET RELIEF FUND.

TENTH ANNUAL REPORT OF THE ALMONERS.

THE LANCET Relief Fund, which has for its Almoners the President of the Royal College of Physicians of London (Sir SAMUEL WILKS, Bart., M.D. Lond., F.R.S.), the President of the Royal College of Surgeons of England (Sir WILLIAM MACCORMAC, Bart., K.C.V.O.), the President of the General Medical Council (Sir WILLIAM TURNER, M.B. Lond., F.R.C.S. Eng. and Edin., F.R.S.), Mr. THOMAS WAKLEY, F.R.C.S. Eng., and Mr. THOMAS WAKLEY, jun., L.R.C.P. Lond., with Sir HENRY PITMAN, M.D. Cantab., F.R.C.P. Lond., as Honorary Auditor, came into operation on the 1st of February, 1889.

In presenting the tenth annual report the Almoners think it well again to direct attention to the object for which the Fund was established.

The Fund is sustained solely by the proprietors of THE LANCET who provide every January the sum of at least £300 and is administered free of cost, with the object of affording immediate pecuniary assistance to registered medical practitioners or to the widows and orphans of members of the profession in cases of distress and emergency, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

When the Fund was inaugurated considerable misapprehension existed as to the precise objects for which it had been established; and as a result the majority of the earlier applications, being cases of *chronic* distress, and not coming, therefore, under the designation of *emergency*, could not be entertained. Attention was called to this fact in THE LANCET of Feb. 16th, 1889, in the following words:—

"We are requested by the Almoners to state that, from the character of a number of the applications received, both personally and by letter, for relief, it is evident that in many cases the object for which this Fund has been established is not quite clearly understood; and if relief had been afforded in the cases of those who suffer from chronic distress the Fund would have been completely exhausted within the first few days of its existence. They would therefore be greatly obliged if those readers of THE LANCET who may be asked to endorse applications would carefully peruse the Application Form and explain the precise object of the Fund to those applicants whose cases do not seem to come within the scope of the purpose for which the Fund has been established, which is to afford prompt aid to registered medical practitioners, or to the widows or orphans of members of the profession, who, in consequence of the supervention of some unexpected emergency, which is not likely to recur, have pressing need of immediate and temporary pecuniary relief"—and who, it may once more be pointed out, are likely to be permanently benefited thereby.

The balance in hand at the end of 1897 amounted to the sum of £173 5*s.* 8*d.* On Jan. 3rd, 1898, the Proprietors of THE LANCET placed to the credit of the Fund the sum of £300. During the course of the year repayments of loans to the amount of £15 have been made. The sum of £175 has been granted in relief either by way of loan or of gift, leaving a balance of £318 5*s.* 8*d.* as per bank pass-book.

There have been considered altogether during the twelve months ending Dec. 31st, 1898, 33 applications for relief (the number the previous year having been 37). In 24 cases assistance was awarded either as a loan or as a gift according to the request of the applicant, the amounts of the grants ranging this year from £5 to £25.

The Almoners are glad to find from the number of letters received from recipients of the Fund that it continues to be of service to unfortunate members of the profession and that the particular object of assisting cases of emergency and immediate distress has been attained.

(Signed)

SAMUEL WILKS. WILLIAM TURNER.
WILLIAM MACCORMAC. THOMAS WAKLEY, JUN.
THOMAS WAKLEY.

Statement of Accounts for the Year ending Dec. 31st, 1898.

DR.

	£	s.	d.
To Balance at the London and Westminster Bank, Limited (Westminster Branch), Jan. 1st, 1898	173	5	8
,, Proprietors of THE LANCET	300	0	0
,, Repayment of Loans :—			
Case No. 339 ... ... £1 0 0			
,, ,, ... 1 0 0			
,, ,, ... 1 0 0			
,, 361 ... ... 2 10 0			
,, ,, ... 2 10 0			
,, 339 ... ... 1 0 0			
,, ,, ... 1 0 0			
,, 361 ... ... 2 10 0			
,, ,, ... 2 10 0			
	15	0	0
,, Cheque outstanding Case No. 414	5	0	0
	£493	5	8
To Balance at Bank	£318	5	8

CR.

	£	s.	d.	£	s.	d.
By Loans :—						
Case No. 385	5	0	0			
,, 397	25	0	0			
				30	0	0
By Gifts :—						
Case No. 382	5	0	0			
,, 383	5	0	0			
,, 384	5	0	0			
,, 387	5	0	0			
,, 390	10	0	0			
,, 391	5	0	0			
,, 394	10	0	0			
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,, 410	5	0	0			
,, 414	5	0	0			
,, 415	5	0	0			
,, 416	5	0	0			
				145	0	0
,, Balance at Bank, Dec. 31st, 1898				318	5	8
				£493	5	8

I find by the Bankers' Book that the actual balance on Jan. 1st, 1898, to the credit of the Fund was £173 5*s.* 8*d.*, to which the sum of £300 was added by the Proprietors of THE LANCET on Jan. 3rd, 1898.

The balance at the Bank at the present date is the sum of £318 5*s.* 8*d.* I have also checked the receipts for disbursements and find the above account strictly accurate.

December 30th, 1898.

HENRY A. PITMAN, Hon. Auditor.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5467 births and 4105 deaths were registered during the week ending Dec. 31st. The annual rate of mortality in these towns, which had been 16·6 and 17·8 per 1000 in the two preceding weeks, further rose last week to 19·1. In London the rate was 18·4 per 1000, while it averaged 19·5 in the thirty-two large provincial towns. The lowest death-rates in these towns were 12·6 in Croydon, 13·7 in Huddersfield, 14·1 in Cardiff, and 14·6 in Halifax; the highest rates were 23·5 in Blackburn, 23·6 in Oldham, 24·3 in Wolverhampton, and 24·6 in Gateshead. The 4105 deaths in these towns included 405 which were referred to the principal zymotic diseases, against 372 and 424 in the two preceding weeks; of these 106 resulted from diphtheria, 95 from measles, 71 from whooping-cough, 63 from "fever" (principally enteric), 36 from diarrhœa, and 34 from scarlet fever. No death from any of these diseases was recorded last week in Birkenhead; in the other towns they caused the lowest death-rates in Plymouth, Bristol, Sunderland, and Newcastle-upon-Tyne, and the highest rates in Wolverhampton, Gateshead, Nottingham, and Swansea. The greatest mortality from measles occurred in Salford, Manchester, Nottingham, and Swansea; from whooping-cough in Swansea, Huddersfield, Gateshead, Oldham, and Preston; and from "fever" in Derby, Bolton, and Gateshead. The mortality from scarlet fever showed no marked excess in any of the large towns. The 106 deaths from diphtheria included 47 in London, 8 in West Ham, 7 in Sheffield, 6 in Birmingham, 5 in Swansea, 5 in Liverpool, 4 in Leicester, and 4 in Leeds. No fatal case of small-pox was registered during the week under notice either in London or in any of the thirty-three great towns, and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, Dec. 31st, was 2939, against numbers declining from 3259 to 2901 at the end of the six preceding weeks; 225 new cases were admitted during the week, against 276, 260, and 264 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 283 and 284 in the two preceding weeks, further rose to 306 last week, but were 291 below the corrected average. The causes of 60, or 1·5 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Manchester, Salford, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Bradford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 21·0 to 18·2 per 1000, was again 18·2 during the week ending Dec. 31st., and was 0·9 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·4 in Paisley and 17·4 in Dundee to 21·3 in Greenock and 22·1 in Perth. The 548 deaths in these towns included 14 which were referred to whooping-cough, 13 to measles, 10 to scarlet fever, 9 to diarrhœa, 9 to "fever" (principally enteric), and 3 to diphtheria. In all, 58 deaths resulted from these principal zymotic diseases, against 64 and 68 in the two preceding weeks. These 58 deaths were equal to an annual rate of 1·9 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 16 and 14 in the two preceding weeks, were again 14 last week, of which 7 occurred in Glasgow, 3 in Edinburgh, and 3 in Aberdeen. The 13 deaths from measles showed a slight further increase upon recent weekly numbers, and included 6 in Glasgow and 4 in Edinburgh. The fatal cases of scarlet fever, which had increased from 5 to 14 in the five preceding weeks, declined to 10 last week, of which 6 occurred in Glasgow and 3 in Dundee. The 9 deaths referred to different forms of "fever" were within 2 of the number in the preceding week, and included 5 in Glasgow and 2 in Edinburgh. The deaths from diseases of the respiratory organs in these eight towns, which had been 132 and 119 in the two preceding weeks, further declined to 110 last week, and were 76 below the number in the corresponding period of last year. The causes of 26, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·2 per 1000 in each of the two preceding weeks, rose to 27·7 during the week ending Dec. 31st. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 26·8 per 1000, the rate during the same period being 17·2 in London and 20·0 in Edinburgh. The 186 deaths registered in Dublin during the week under notice showed an increase of 17 upon the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 15 and 10 in the two preceding weeks; of these, 4 resulted from whooping-cough, 2 from diarrhœa, 1 from scarlet fever, 1 from diphtheria, and 1 from "fever," but not one either from small-pox or measles. These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 1·8 in London and 1·9 in Edinburgh. The fatal cases of whooping-cough, which had been 5 and 4 in the two preceding weeks, were again 4 last week. The mortality from "fever" also corresponded with that recorded in the preceding week; while the mortality from scarlet fever showed a decline. The 186 deaths registered in Dublin last week included 38 of infants under one year of age and 44 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers recorded in the preceding week. Twelve inquest cases and 8 deaths from violence were registered; and 73, or more than a third, of the deaths occurred in public institutions. The causes of 19, or more than 10 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

STAFF SURGEON SAMUEL WILLIAM VASEY has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet.

The following appointments are announced:—Staff Surgeons: Graham E. Kennedy to the *Liffey;* Edward J. Morley to the *President;* Charles W. Sharples to the *Australia*, for R.N. Rendezvous and Medical Depôt; and Vidal G. Thorpe to the *Furious*.

ROYAL ARMY MEDICAL CORPS.

Major J. J. C. Donnet proceeds from Poona to Rawul Pindi for temporary duty in the Punjab Command. Captain H. A. Bray and Captain J. H. Rivers, now in India, proceed to Cairo for service with the Egyptian Army on the Nile. Majors J. J. O'Donnell, R. O. Cusack, A. O. Geoghegan, and F. B. Maclean, Captain S. J. Perry, and Lieutenant S. O. Hall have left England in the *Dilwara* for India; Major C. W. Allport is *en route* to Malta in the *Jelunga*, and Captain W. E. Hardy is *en route* to Cape Town in the *Goorkha*.

INDIA AND THE INDIAN MEDICAL SERVICES.

Colonel Eaton, Royal Army Medical Corps, Principal Medical Officer, Poona District, having been directed to proceed from Poona to Nowshera to assume the duties of Principal Medical Officer, Malakand Field Force, Lieutenant-Colonel W. J. Fawcett, Royal Army Medical Corps, takes charge of the office of Principal Medical Officer, Poona District, in addition to his own duties.

The Queen has approved of the following promotion:—To be Colonel: Lieutenant-Colonel William McConaghy, Bombay Establishment. The Queen has also approved of the retirement from the service of the under-mentioned officers:—Lieutenant-Colonel Frederick Henry Blenkinsop, Madras Establishment; Brigade-Surgeon-Lieutenant-Colonel Frederick Augustus Smyth, Bengal Establishment; and Lieutenant-Colonel Phirozsha Jamsetji Damania, Bombay Establishment.

VOLUNTEER MEDICAL STAFF CORPS.

Captain Lewis Way, Royal Army Medical Corps, to be Adjutant, vice Captain G. T. Rawnsley, whose period of

service has expired. Surgeon-Captain B. Locking to be Medical Officer to the 3rd Battalion, Wellington (East Coast) Rifle Volunteers, with present rank.

ARMY MEDICAL STAFF AND ROYAL ARMY MEDICAL CORPS.

The following retirements will take place during the present year :—Surgeon-General A. F. Churchill, June 14th; Surgeon-General T. Maunsell, C.B. July 1st; Surgeon-General W. Nash, Nov. 20th; Colonel R. P. Ferguson, March 13th; and Lieutenant-Colonel A. H. Anthonisz, Dec. 22nd.

THE NEW YEAR HONOURS.

The following officers of the Indian Medical Service are included in the New Year's Honours' list: Colonel William Pleace Warburton, M.D. Edin., and Colonel David Sinclair, M.D. Aberd., receive Companionships of the Order of the Star of India, and Lieutenant-Colonel Henry Kellock McKay, M.R.C.S. Eng., and Major Winthrop Benjamin Browning, L.R.C.P. & S. Irel., Companionships of the Order of the Indian Empire; Captain John Lloyd Thomas Jones, M.B. Durh., Captain William Ernest Jennings, M.B. Edin., Captain Arthur Frederick William King, M.R.C.S Eng., L.R.C.P. Lond., and Lieutenant William James Niblock, M.B. R.U.I., are to be enrolled as Honorary Associates of the Order of the Hospital of St. John of Jerusalem in England.

BADGE FOR THE ROYAL ARMY MEDICAL CORPS.

The *Daily Mail* of the 3rd inst. has the following announcement:—The military headquarters and the Herald's College of Arms have designed a badge for the newly-formed Royal Army Medical Corps which now comprises all ranks of the old Army Hospital Corps and the Medical Staff Corps. From time immemorial the serpent and rod have been the emblem of the art and practice of medicine, and it has therefore been decided to make the serpent the future badge of the Royal Army Medical Corps. The serpent is entwined round a caduceus enclosed in a laurel wreath surmounted by the Imperial crown, with the motto, "In arduis fidelis."

THE EXAMINATION FOR THE ARMY MEDICAL SERVICES.

The result of the next competitive examination for the Royal Army Medical Corps and Indian Medical Service is awaited with great interest as medical officers are much needed to fill up the establishment and relieve the pressure on medical officers at present serving in the Royal Army Medical Corps especially.

DEATHS IN THE SERVICES.

Surgeon-General L. S. Bruce, retired, at Ealing, aged sixty-eight.

Correspondence.

"Audi alteram partem."

"WHAT IS TABES MESENTERICA IN INFANTS?"

To the Editors of THE LANCET.

SIRS,—Dr. J. W. Carr's letter in THE LANCET of Dec. 17th raises the interesting question how far infection of infants with tubercle really takes place through the alimentary in comparison with the respiratory tract. I cannot quote statistics such as his but I can thoroughly endorse what he says as to the too free use of the expression "consumptive bowels" by the class of parents who bring their children to hospitals. Over and over again I have been asked, when seeing a wasted infant half killed by improper feeding, but presenting no evidence whatever of tubercle either of the abdominal or thoracic organs, "Do you think baby is suffering from 'consumptive bowels'?" Ask the mother why she has this idea and she replies, "My doctor told me so"; and she is obviously dissatisfied with the statement that there is no evidence of "consumptive bowels" but much evidence of her own ignorance and possibly of neglect. Clearly, as Dr. Carr says, the condemnation to death under the phrase "consumptive bowels" has satisfied everyone and exonerated both parents and medical man from any further effort to preserve the child's life; and yet over and over again such a child, if not too much enfeebled, has recovered on admission to hospital, where the only treatment has been rational feeding and where no sign of tubercle has ever shown itself. Such cases, I am sure, help to swell largely the Registrar-General's death returns of abdominal tuberculosis, particularly in the class under one year, and to vitiate any argument based on the alleged increase of "tabes mesenterica."

There is another matter which I think has been strangely overlooked in the question of infection by tuberculous milk which now occupies so prominent a place in our medical and lay journals. It seems to be generally assumed that the children of our poor are fed upon "raw" milk. We as a nation are even held up to opprobrium for our habit of giving uncooked and therefore possibly tuberculous milk to children. It is generally assumed that while the children of the well-to-do are fairly carefully guarded against such infection by their milk being boiled, the children of the poor are perpetually exposed to this danger by being fed on "raw milk." My own experience is that the poor almost invariably when using fresh milk boil their pint or two pints as soon as they receive it. At the North-Eastern Hospital for Children I have asked the question in hundreds and hundreds of cases, "Are you careful to boil the milk before giving it to your baby?" I can hardly remember a single instance where the answer has been in the negative, and a moment's reflection will show that these people are speaking the truth. In their small hot rooms it is not easy to preserve milk for many hours, particularly in the summer, and therefore they are forced into taking the best course known to them for preserving the milk—namely, boiling. I quite believe that the milk which has been boiled in the morning is often exposed before use to fresh infection, but this is very rarely tuberculous.

It is generally admitted that boiling or even Pasteurising at 167° F. will render tuberculous milk safe, and if this be so and my contention as to the boiling of the great bulk of the cows' milk used for infant feeding in our big towns is also true, then we do away with the argument that the alleged increase in tabes mesenterica is due to milk infection and we may well follow out Dr. Carr's inquiry as to whether tabes mesenterica is really so common a disease, as a ready acceptance of the Registrar-General's returns might lead one to believe. I do not for one moment suggest that the precautions advocated in Sir William Broadbent's speech at Marlborough House as to rejection of tuberculous cows as milk suppliers should not be carried out, but I feel that if there is any increase in tuberculous mesenteric disease, which I consider very doubtful, the causes must be sought for elsewhere than in our milk-supply. For even that pernicious article "condensed milk," so largely used among the poor from its cheapness, convenience, and its palatability (to infants' taste), has undergone sterilisation at 212° F. previously to its condensation and is therefore presumably harmless from a tuberculous point of view. If official supervision be exercised over our own dairy cows and the tuberculous ones be excluded as milk-suppliers it is earnestly to be hoped that the very large and increasing quantity of foreign fresh milk imported will be subjected to a rigid bacteriological scrutiny which will make it impossible for tuberculous foreign milk to undersell pure English milk whose cost must almost necessarily be raised by the restrictions on its supply involved by a rejection of tuberculous dairy cows.

I am, Sirs, yours faithfully,

Lower Seymour-street, W., Dec. 30th, 1898. W. A. WILLS.

"THE SEAMEN'S HOSPITAL SOCIETY AND ITS VISITING STAFF."

To the Editors of THE LANCET.

SIRS,—Dr. Manson's impressions as to his position on the staff of the Seamen's Hospital Society as set forth in his letter in THE LANCET of Dec. 31st are so mistaken that we are again obliged to draw his attention to the written records on the subject.

On April 9th, 16th, and 23rd, 1892, advertisements appeared in the medical press (THE LANCET and *British Medical Journal*) for a visiting physician to the Seamen's Hospital Society's Branch Hospital, Victoria and Albert Docks. Dr. Manson was a candidate for this post. He was selected on May 4th by a sub-committee of which we were members and duly elected on May 13th to the appointment he sought. Reference to the minute-book to which we

referred him clearly shows this. It was some considerable time after Dr. Manson was appointed to the Branch Hospital that the physicians of the *Dreadnought* as an act of courtesy to him allowed him the use of 6 beds in their wards for cases which had been under his care at the Branch. They both lent him 3 beds, little supposing that this concession would lead him to assume the title of "Physician to the Seamen's Hospital, Greenwich."

The annexed letter from us to Dr. Manson (Jan. 21st, 1896) clearly put before him his real position, yet after his apology (copy of which is enclosed) he now writes: "At the time of the correspondence referred to I did consider, as I still consider, that I had a perfect right—in fact, as much right as either Dr. Curnow or Dr. Anderson had—to designate myself 'Physician to the Seamen's Hospital, Greenwich.'" The profession must judge whether it is "in conformity with medical custom" for a physician elected to one hospital to describe himself as physician to another and whether the officers of the latter have not cause for remonstrance if such is repeatedly done.

We are, Sirs, your obedient servants,
JOHN CURNOW.
JOHN ANDERSON.
Jan. 3rd, 1899. G. R. TURNER.

[*Copy of Letter from the Staff of the Seamen's Hospital to Dr. Manson.*]

Dreadnought Seamen's Hospital, Greenwich,
21st January, 1896.

DEAR DR. MANSON,—With reference to your letter to Mr. Michelli of the 18th Dec. last, a copy of which has been sent to one of us and which we should have replied to sooner but for the Christmas holidays, we wish to draw your attention to the terms of your appointment as shown in the minute-book of the Seamen's Hospital Society.

On May 4th, 1892, a sub-committee met to recommend a physician to the Branch Seamen's Hospital at the Royal Victoria and Albert Docks and an ophthalmic surgeon to the Seamen's Hospital Society. In the same minute-book (May 13th, 1892, page 138) it is noted that you were elected to the office of physician to the said branch hospital and Mr. Gunn ophthalmic surgeon to the Seamen's Hospital Society. We also wish to call your attention to the 74th official report of the Seamen's Hospital Society (copy enclosed) in which you are styled Physician to the Royal Victoria and Albert Docks' Hospital and to the official note-paper in which a distinction is clearly drawn between the *Dreadnought* Seamen's Hospital, Greenwich (235 beds), and the Branch Seamen's Hospital, Royal Victoria and Albert Docks (18 beds).

It appears clear to us from the foregoing that you should not allow yourself to be described as "Physician to the Seamen's Hospital, Greenwich," as has lately been done in the list of contributors to Davidson's "Hygiene and Diseases of Warm Climates," the *British Medical Journal*, Kelly's London Medical Directory, 1895, and Churchill's Medical Directory, 1896. If there is still any misunderstanding we shall be happy to meet you and discuss the matter. We are forwarding a copy of this letter to Mr. Michelli.

We remain, yours faithfully,
(Signed) JOHN CURNOW, } Visiting Physicians.
JOHN ANDERSON, }
G. R. TURNER, Visiting Surgeon.

[*Copy of Letter from Dr. Manson to Mr. W. Johnson Smith.*]

21, Queen Anne-street, Cavendish-square,
4th Feb., 1896.

DEAR MR. JOHNSON SMITH,—Many thanks for your very courteous letter.

Your interpretation of mine to Mr. Michelli is correct. Therein I explained how I came to call and allow myself to be called "Physician to the Seamen's Hospital, Greenwich," a mistake I shall be careful to avoid in future. Please accept and convey my apologies to the medical staff.

Yours very truly,
(Signed) PATRICK MANSON.

"TWO CASES OF CÆSAREAN SECTION" (ON ACCOUNT OF IMPACTED OVARIAN TUMOUR).

To the Editors of THE LANCET.

SIRS,—Dr. Braithwaite publishes in your issue of Dec. 31st two cases in which he successfully performed Cæsarean section on account of ovarian tumour impacted in the pelvis during advanced pregnancy. As Cæsarean section has been performed several times of late on account of this condition I would beg a little of your space to point out that an impacted ovarian tumour is not an indication for this severe operation which in addition to its immediate danger entails some risk of rupture of the uterus in a subsequent pregnancy and of the formation of calculi if the uterine sutures work their way into the bladder. Not to mention removal of the tumour by the vagina (which personally I do not favour), the difficulty may be got over either by reposition of the tumour or, if that be impossible or inadvisable, by slightly[1] enlarging the abdominal incision and withdrawing the uterus from the abdomen and then removing the tumour and replacing the uterus, first delivering the child by the vagina if the cervix be dilated during labour. During the last two years I have met with 4 cases of incarcerated ovarian tumour during pregnancy which I have removed by simple abdominal ovariotomy. In one case I removed the tumour during pregnancy, in two others pushed it up and removed it after delivery, and in the fourth removed it during labour by the last method mentioned above. The mothers and children all survived. In Dr. Braithwaite's second case I notice that the child (which subsequently died) was removed shoulder first, but as the child can only be delivered in this position through an unnecessarily large incision and with increased danger to its life it would seem to be better to follow the practice of ordinary midwifery and deliver by version (preferably cephalic).

I am, Sirs, yours faithfully,
Harley-street, W., Jan. 2nd, 1899. HERBERT R. SPENCER.

"DIPHTHERIA ANTITOXIN IN PRIVATE PRACTICE."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 24th, 1898, page 1733, there appears a letter on Anti-diphtheritic Serum signed "H. E. G." This writer raises two important points—viz., dose and price; and as he mentions us by name kindly permit us a word in reply. First as to dose. He puts the number of antitoxin units used at the hospital where he worked and of which he was assistant medical officer as not uncommonly from 8000 to 16,000, and even 24,000 in forty-eight hours, with the result "that he was so convinced of the good obtained that when he took up private practice he determined to adopt it." Very satisfactory. "H. E. G.'s" experience corroborates that of Dr. Sidney Martin as detailed by him in the *British Medical Journal* of Sept. 3rd, 1898, and no one so far as we know has had greater success than he at University College Hospital. His average dose now is 6000 units; but at a *tentative time* doubtless he prescribed many more. His low rate of mortality has encouraged others, so that it would be true to say that the dose of antitoxin has a tendency upwards. Some bacteriologists believe that failures in its use three or four years ago were probably due in many instances to the antitoxin being too weak and being administered in an impotent dose; and as medical men become converted to the views propounded by Dr. Martin and endorsed by your correspondent "H. E. G." so will the mortality from diphtheria in all probability fall to almost vanishing point. And therefore we think that great service has been rendered by the attention of the profession being drawn to the proper doses of serum.

Till recently it has been impossible to obtain very strong serum commercially, but now with a serum containing 1250 units per c.c. it is possible to administer in 4½ c.c. (about 2 drachms) a dose of 6000 units. Our serum is tested and certified by one of the highest bodies in the land; it will retain its potency for months, and there is no difficulty about "stocking" it either on the part of local chemists or of medical men themselves.

"H. E. G." has done us an injustice, no doubt unintentionally, in quoting our price as 17*s.* 6*d.* for 2000 units. Our charge is 6*d.* per 100 units, at which figure it has stood for *eight months* past; and considering all that is stated above we consider it a fair one.

We enclose herewith our circular letter concerning serum-therapy and our price list of serum Kindly forward it to "H. E. G." with our assurance that both have been circulated for many months past.

We shall be most pleased to answer questions.

We are, Sirs, yours faithfully,
PARKE, DAVIS, AND CO.
North Audley-street, W., Dec. 28th, 1898.

To the Editors of THE LANCET.

SIRS,—I would venture to suggest that your correspondent

[1] It is remarkable through how small an incision the uterus can be delivered if it be tilted so that one cornu presents and the abdominal wall be pulled back over the uterus instead of trying to lift the organ out of the abdomen.

"H. E. G." in THE LANCET of Dec. 24th, 1898, must have made a mistake in his figures. For 16,000 units read 1600, and I think the latter figures will represent the dose of serum usually recommended in all but the severest and most unfavourable cases. Probably this is only a clerical error; but I can imagine many a country practitioner might be deterred from using the serum by the cost so large a dose would involve. I have had several most successful cases and have never had to use more than 1500 units.

I am, Sirs, yours faithfully,

Dec. 28th, 1898. G. M. P.

ERRATUM.—In Mr. H. E. Allen's letter published in our issue of Dec. 24th an asterisk should have appeared before the name of the Royal College of Surgeons in Ireland, indicating that the preliminary examination of this body is no longer on the General Medical Council's list.

THE IRISH LOCAL GOVERNMENT ACT.

(FROM OUR SPECIAL COMMISSIONER.)

SANITATION AND THE DISPENSARY MEDICAL OFFICERS.

THE new law for the local government of Ireland will come into force on the 25th of March this year. The question naturally arises as to the effect which this most recent phase of Irish legislation is likely to have upon the position of the medical officers of dispensaries. This large class of practitioners suffer from grievances which are closely akin to those denounced in THE LANCET under the headings of "The Battle of the Clubs" and "Hospital Abuse." But the position of the Irish dispensary medical officer is often more hopeless. As Ireland is mainly an agricultural country there are but few large towns. Therefore medical practices are principally rural; the populations are very poor, so that the dispensary medical officer is dependent on his salary and cannot hope to acquire a private practice of sufficient importance to make him independent of his appointment. There are 159 unions in Ireland. Each union has its board of guardians, its workhouse hospital or infirmary, and a medical man attached who, as a rule, only attends to the hospital patients. These union districts are, however, very large and have consequently been subdivided into 893 dispensary districts. Each dispensary district has its dispensary committee which is under the jurisdiction of the board of guardians and some guardians may attend the meetings of such committees *ex officio*. The dispensary committee is a very small local body. In the rural districts—and these constitute the vast majority of the districts—there are but few educated persons who could possibly be chosen as committee-men. These nominations are made by the board of guardians and the nominee must have a rating of £30 a year. The committee is supposed to meet at least once a month but its members do not always observe this rule and are far more ready to come together for election and political purposes than for the carrying out of dispensary business. The committee-men are largely selected from the petty tradesmen and small farmer class. They are very generally chosen for political reasons; many do not even know how to read but they have influence in keeping together the political party which nominates them. Sometimes a justice of the peace may be appointed but very often he does not reside in the district and therefore does not attend. Stupid, uneducated farmers and illiterate pothouse politicians who cannot even sign their names are put on these dispensary committees. They have no knowledge of public duties and of local administration. All they can do is to rail against the Jesuits if it be a Protestant district and to abuse the Saxon domination if it be a Roman Catholic district. Yet it is these miserable, petty local committees, where the ignorant prejudices and fanaticism of either Protestant or Roman Catholic, according to the district, govern all other considerations, which have had the mission to select and appoint the dispensary medical officers. Certainly the Irish Local Government Board defines what should be the qualification of the medical man—i.e., a knowledge of medicine, surgery, and midwifery—but it is the dispensary committee which selects among qualified candidates the medical man it prefers.

What, then, has a medical men to do so as to secure his election by such a committee? First and foremost he must pay court to the leading local priest or minister. It is of absolutely no use striving unless he is in religious accord with the majority of the district. He must be Presbyterian with the Presbyterians and Roman Catholic with the Roman Catholics or his chances are *nil*. Then he must have the same political opinions as the members of the dispensary committee; and though as a rule Roman Catholics are Nationalists and Protestants are Unionists this is not always the case. Nor does the difficulty end here. In some districts the successful candidate has been elected on the strength of being a boon companion which is not altogether the best qualification for attending upon the sick poor. When a vacancy occurs there is, unfortunately and in spite of these degrading conditions, a great rush of candidates. Perhaps as many as twelve medical men will apply for the vacant post. Invariably the first question asked relates not to the experience or capacities of the candidate, but to his religious opinions. This inquisition is equally strict on both sides. The Protestants are just as prejudiced and unfair as are the Roman Catholics. As a dispensary medical officer put it to me, "The candidate must square the parish priest or the Tory landlord, otherwise he has not the ghost of a chance." Then to succeed he should be a friend or relation of one or more of the members of the committee or of the parish priest. The committee will not inquire about the candidate's technical capacities, his success as a practitioner is the last of all considerations; they will scarcely inquire if he is sober. Indeed, there are cases of persons to whom the Local Government Board have taken objection and who have nevertheless been re-elected by these dispensary committees. The election is reported by the dispensary committee to the board of guardians and by the latter to the Local Government Board, which final authority always confirms the election unless the candidate had been on a previous occasion dismissed from the Poor-law service.

The dispensary medical officer has not only to attend to the sick poor but as a rule he is also the medical officer of health of the district, the public vaccinator, and the registrar of births, deaths, and marriages. It is bad enough that the attendance on the sick poor should depend upon such a method of election as that thus described but the general public health is likewise imperilled. The dispensary committees consist for the most part of a class of men who know nothing and care less about sanitary matters. They are dirty and careless in their habits and if the dispensary medical officer were to do his duty as medical officer of health he would have to report against the very committee-men who had appointed him. Then in rural districts the dispensary medical officer receives perhaps only £10 a year for his work as medical officer of health. The practical result is that nothing is done and no attempt is made to alter even the most flagrant insanitary conditions. The Irish Medical Association has sought in vain to improve this deplorable state of affairs. Deputations were sent to London before the Irish Sanitary Act was passed. They induced Sir Michael Hicks-Beach to introduce a clause in the Bill appointing superintendent medical officers of health for all Ireland who were to see that the local medical officers of health did their duty. The deputation returned from London delighted with the result of their mission. But when the Bill had become law the Local Government Board of Ireland set to work to neutralise its effects. Instead of insisting at once on the appointment of competent superintendent medical officers of health a circular was sent round to the boards of guardians saying that in appointing medical officers of health no salaries would be sanctioned which exceeded in amount a quarter of the sum paid to the local dispensary medical officer. This meant that the latter whenever appointed to act as medical officer of health could rarely obtain more than £25 and generally only about £12 or £15 a year for performing these extra duties. The guardians and the dispensary committees being for the most part diametrically opposed to any sort of sanitary reform in many cases did not offer even this small amount, so that there was practically every inducement for a medical officer of health who wished to get on with his Board to leave matters alone. With regard to the superintendent medical officers of health who were to put an end to this systematic negligence, the Irish Local Government Board commenced by issuing a circular altering the name of the office to that of "consulting sanitary officer." By this it was inferred that they were not to act

unless they were consulted. Naturally it was well known that they were never likely to be consulted. But further, to make it still more certain that they should do nothing it was laid down that they were to receive no salary whatsoever. They might, it is true, be paid a guinea per consultation when consulted, and of course this possibility of having to pay a guinea was another very good method of preventing any effective sort of superintendence being exercised. Thus public health questions remain in abeyance and it may be said that so far as the rural districts and the small towns are concerned medical officers of health exist only in name.

The question now arises whether under the new Local Government Act any improvement will take place. The Act abolishes the local dispensary committees. The districts will remain but the appointments of dispensary medical officers to those districts will be made by the boards of guardians. These being larger and more important bodies it is supposed that they will be less amenable to corrupt and petty local influences. On the other hand the *ex-officio* guardians have been abolished. They consisted of the largest ratepayers and property-owners of the neighbourhood who sat on the board of guardians without being elected. This gave a certain tone to these bodies. Now all the guardians must be elected, so they will all be strict party men. These new boards of guardians will, it is supposed, be controlled, at least to some extent, by the district councils representing a federation of five unions. Again, the district councils are in their turn to be controlled by the county councils. But the functions of these various authorities differ greatly and it is thought that the control they will exercise will prove to be very slight. Opinions are much divided as to the probable result. Some think there will be an improvement; others, on the contrary, maintain that the present grievances will, if anything, be accentuated.

So far as the interests of the public are concerned the first and most urgent reform needed is that the appointment of dispensary medical officers and medical officers of health should depend wholly on the ability of the candidates to fulfil the duties involved and not on their political or religious opinions. The neutralising of such offices would certainly be quite contrary to the spirit and inclinations of the Irish people whether Protestant or Roman Catholic, but it is nevertheless most necessary. To what length political and religious antagonism may go is best shown by a most melancholy story related to me. A dispensary medical officer had reached the age of eighty-two years. For several years he had been quite unfit for his work. He was called up at all hours of the night and sometimes he had to see patients who lived at a distance of eight miles, but more often than not the patients had to do without him. Not only was he weak, old, and infirm, but he was partially blind. Still he kept on as long as was possible, striving to do his work, as he was dependent solely on his salary for his subsistence. At last three members of his dispensary committee called upon him and promised that if he resigned they would persuade the committee to grant him a pension. Though advised by his friends not to accede to this request the medical officer, feeling that he had no longer the strength to attend properly to his patients, finally tendered his resignation. He thus placed himself at the mercy of the committee, for he had only the promise and not the certainty of a pension. The three committee-men who had seen him before now called again. They repeated their promise to get him a pension but explained that they were unable to do so for the moment because it had been discovered that he had not resigned his post as medical officer to the constabulary. He must also resign that function so that they might have more to offer to the new dispensary medical officer who had soon to be appointed. In vain the aged practitioner protested that this was his last source of income and that if he gave it up and they failed to obtain the promised pension he would be reduced to beggary; still they insisted and finally he complied. No sooner had this been done than the three members of the dispensary committee, instead of keeping their promise and using all their influence to prevail upon the committee to vote a pension, sought, on the contrary, with all their force to oppose the proposal to grant the pension. They explained that they had persuaded the old man to resign so as to get rid of him. His daughter had accepted a seat on an "outside car" to drive to the local railway station to see the train pass which bore the Prince of Wales on his way to Cork. This was an insult to the Nationalism of the committee and therefore the dispensary medical officer, after years of faithful service, was treacherously persuaded to resign. He was left to starve, and did not get any pension whatever, because his daughter had tried to see the Prince of Wales.

But in such cruelty and heartlessness the Roman Catholics are not alone. The Protestants can be guilty of equal inhumanity. Thus the story was told me of another dispensary medical officer serving a Protestant dispensary committee in the north of Ireland. He was very old and he suffered acutely from "rheumatic gout." He had to drive to his patients and when on reaching a village he arrived at the cottage where they were waiting for him the patients came out one by one and stood on the sidewalk. He questioned and examined them as best he could without leaving his trap. He had served this district for forty years, yet his committee would not give him a pension nor would they pay for a locum-tenent. At last he had to ask his son to help him, though his son had a dispensary district of his own situated six miles away. With this aid he continued the work for two years more and then died in harness. What are we to think of a local authority which can be guilty of such cruel and petty economy?

The new Act deals with the question of pensions but in a most unsatisfactory manner. All dispensary medical officers who are sixty years old on March 25th, 1899, and have worked in that capacity for twenty years will get a pension equal to one-third of their salary. This they will obtain whether the guardians approve or not. But after this one settlement the old and vicious system comes in force again. Dispensary medical officers will once more depend on the boards of guardians for their pensions. These boards will be able to refuse to give any pension whatsoever or they may give as much or as little as they choose. Thus the improvement effected by the Act will have but a transitory effect.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

A New System of Administration of Plague Measures.—The Proceedings of the Plague Commission.—The City of Bangalore.

THE drastic measures originally carried out with the idea of controlling the plague epidemic have been gradually relaxed. With the recognition of their failure to limit the disease the Government have now gone to the other extreme. Amongst other things they have concluded that to make hospitals effective it is necessary to secure the confidence of the classes for whose succour they are built and maintained. Having found that even with house-to-house visitation fully 50 per cent. of cases were successfully concealed the Government have now decided to encourage the voluntary reporting of cases. This is hoped to be achieved by making the hospitals attractive and by taking measures to eliminate the lesser discomforts and loss resulting from disinfection and to obviate the hardship of the temporary removal of the poorer classes of people from infected houses and streets. It is supposed that so long as hospitals are regarded with suspicion and dislike there will be concealment of cases and opposition to removal. The hospitals are to be ornamented with plants and flowers and hakims and native practitioners may be employed by the patients. The sufferings of the poor whose normal poverty is sadly aggravated by the visitation of plague are to be mitigated by the support of the family of the sufferer during the incapacity of the bread-winner, by the payment of funeral expenses if death supervenes, by the provision of extra rations for a few days before the discharge of the convalescent, and by assistance to such to return to their families. To obviate concealment of cases through dread of disinfection compensation on the spot will be made to the poor for destruction of any clothing and a sum will be handed over to meet the expense of removal during a temporary vacation of their house and transfer to a camp. A blanket is to be given and in special cases a charpoy will be provided. For these purposes of so-called discretional relief there will be officers appointed. This administration of plague measures sounds very kind and charitable and certainly contrasts very strongly with that which has been done before. It took many years in

England before the working classes got over their aversion to enter the hospitals and it is not likely that the passive opposition to all plague measures by which the natives express their dislike will be overcome very readily.

A notice prohibiting the passage of suspicious persons to Malabar Hill and the neighbourhood has been published in the Government *Gazette*. Plague authorities specially appointed by the Municipal Commissioner of Bombay for the purpose are authorised to prevent the passage of suspicious persons and their clothing, baggage, &c., into the local area defined. As the value of even a rigid medical inspection of all travellers is very limited it is manifest that an order of the above character where there is no cordon round the area concerned or medical inspection of persons entering it is practically worthless.

Acting on the assumption that the rat is an active agent in propagating plague the Health Department in Bombay city have organised a systematic destruction of rats. Last week 5263 were destroyed. After the first outbreak the rat population was nearly exterminated. In the interval before the next outbreak this rat population was partially regenerated but was again reduced by the recrudesence of plague last spring. For some months past it has been evident that the normal rat population of Bombay was fast returning and the finding of considerable numbers of dead and dying rats in certain parts was regarded with apprehension.

The Plague Commission opened its sittings at Bangalore on Dec. 12th. Colonel Robertson, the British resident, was first examined. He described the course of the outbreak and the ordinary recognised measures which were adopted. He referred to the difficulties of administration due to the stress of work and to the strikes and to the troubles about the water-supply. The police and military aid had been invoked because a certain show of force was required to support the medical officers whom it was hazardous to send into the bazaars inadequately escorted. He also referred to the general opposition to plague measures. Captain Roe, R.E., the chief plague officer of the cantonment, was the next witness examined. He thought that segregation had been a failure. When a case was reported he found that half the people of the house ran away. The fear of the natives was due to the dread of disinfection and the loss of property. Major Deane, R.A.M.C., could not say that infection could be conveyed one way more than another. He thought that people attending plague patients in hospitals might carry infection through their clothing. Colonel T. McGann gave evidence concerning inoculation in the district. Colonel Dobson, I.M.S., referred to various antiseptics which had been used. He had noticed that plague ran a middle course amongst inoculated persons. He thought that no special treatment by drugs served to do any good. The proceedings of the Plague Commission not being open to the public information concerning the evidence tendered is only available through the press, but it is possible to cull the chief points of medical interest from the reports published. So far the information obtained is very unsatisfactory, and the evidence may be described as merely the brief verbal report of plague officials brought up to date.

The city of Bangalore, with a population of 60,000 persons, seems to have suffered very severely from plague. Up to Dec. 2nd there had been 2985 cases and 2361 deaths. The highest total on one day was reached on Nov. 11th, when 122 cases were reported. The plague is making serious headway in the adjacent towns. Madras city gets a few cases imported from time to time. Up to date 4609 persons have been inoculated there.

The promulgation of new rules by the Mysore Durbar has given great impetus to inoculation, some 18,000 persons having been operated upon in the city of Mysore during the past two weeks. There are no less than 150 prisoners to be tried in connexion with the plague riots in Seringapatam.

The Bombay Presidency returns are more favourable. From 4604 attacks and 3690 deaths two weeks ago the figures have fallen to 3923 attacks and 3178 deaths. It will be seen that the death-rate still keeps at about 75 per cent. The total number of cases since September, 1896, is 196,458, and the deaths 155,054. There has been a slight but steady increase in the number of cases in Bombay city during the past three weeks, the deaths for last week from plague being 61. Karachi still occasionally reports a few cases. A few cases have also been again imported into Poona. In Satara the attacks have increased from 310 to 405 and the deaths from 264 to 321. In the Dharwar district the epidemic appears to be rapidly declining. Kolapur reports 548 attacks and 433 deaths, as against 622 attacks and 478 deaths the week previously. There are still 378 infected villages in the Mofussil. The statement of plague cases and deaths reported from stations at which railway medical inspections are carried out shows only 14 cases detected.

Dec. 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Health of Edinburgh for 1898.

THE mortality in Edinburgh for the past year was 5321, making the death-rate 17·99 per 1000. There were 1802 deaths of children under five years of age and 1485 of persons above sixty years. 256 were above eighty years and 25 above ninety years. Diseases of the chest accounted for 1720 deaths and zymotic diseases for 413, of which 9 were due to typhus fever, 27 to typhoid fever, 38 to diphtheria, 72 to scarlet fever, 134 to measles, 124 to whooping-cough, and 9 to erysipelas. The notifications for the year numbered 7368. These included 66 typhus fever, 244 typhoid fever, 269 diphtheria, 6 small-pox, 2388 scarlet fever, and 4395 measles. The number of cases treated in the City Hospital during the year was 2770. The deaths amounted to 5·30 per cent. of the cases admitted.

Health of Leith for 1898.

The number of deaths registered during the past year was 1334, making a death-rate of 17 per 1000; 542 deaths were of children under five years of age and 350 of those under one year; 64 deaths were from infectious disease, this not, however, including the deaths in the fever hospital. Intimations under the Notification Act numbered 651, 354 being of scarlet fever, 112 erysipelas, 96 diphtheria, 67 typhoid fever, 8 puerperal fever, 7 small-pox, 5 membranous croup, and 2 continued fever.

Edinburgh Royal Infirmary.

The annual meeting of the court of contributors to the Edinburgh Royal Infirmary was held on Monday, Jan. 2nd. The annual report was submitted by the treasurer. From this report it appeared that the total number of patients treated during the year amounted to 9434, of whom 4277 were medical and 4499 surgical. The number of deaths was 699. There was a decrease of 194 on the total number of patients treated. The average daily number of patients was 698. The largest number on any one date was 749 and the lowest 600. The average time each patient was under treatment was twenty-seven days; 177 deaths took place within forty-eight hours after admission. Deducting these the percentage of deaths was 5·5. In the out-patient department 29,949 cases were attended to. The total ordinary receipts amounted to £30,383. The ordinary expenditure amounted to £41,885 being an increase of £800 over the previous year. The bulk of that increase was under the head of wages to tradesmen, nurses, &c. The annual cost of each patient was £60 0*s.* 1¾*d.* The extraordinary receipts, consisting of legacies and donations of £100 and upwards, amounted to £30,965.

Jan. 3rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Children's Hospital, Temple-street, Dublin.

THE meeting in connexion with the Christmas festivities at the Children's Hospital on Dec. 28th which her Excellency the Countess Cadogan had kindly promised to honour by her patronage and presence was unavoidably postponed on account of the occurrence in the wards of the hospital of two cases which were suspected of being of an infectious nature.

Medical Appointments to the Dublin, Wicklow, and Wexford Railway Company.

The directors of the Dublin, Wicklow, and Wexford Railway Company have recently appointed Mr. James Raverty to be medical officer of the Bray district, in place of

Dr. Hamilton, deceased. Mr. P. A. McDermott, surgeon to St. Michael's Hospital, has been appointed medical attendant in the Kingstown district.

Belfast in 1899.

Owing to the area which, under a new Bill, was added to Belfast last year its size has increased from 6806 to 16,503 acres and its population from 300,000 to about 340,000. In old Belfast during the past year 3710 new buildings were erected, and 837 in the new area. The total ratable valuation of the old city is now £999,619, that of the added area is £114,280, which brings the total ratable valuation of the City of Belfast at the beginning of this year to £1,124,852.

Belfast Dispensary Districts.

At a meeting of the Belfast Dispensary Committee held on Jan. 2nd Dr. Whitaker (medical officer of health) suggested that there should be a general re-arrangement of the dispensary districts as this was, in his opinion, necessary owing to their growth in recent years. In Dublin, with a population of 245,000, he said, there were 15 dispensary medical officers, while in Belfast with 350,000 inhabitants they had only 12. The matter will probably have to be discussed again, as owing to the added area the work of the dispensary doctors in certain districts has been much increased.

Health of Belfast.

The Public Health Committee have been considering Dr. Lorrain Smith's special report and the whole matter will be dealt with at a special meeting of the city corporation. It appears from Dr. Whitaker's report presented to the Belfast council on Jan. 2nd that between Nov. 20th and Dec. 17th, 1898, 158 cases of typhoid fever, 71 of scarlet fever, 59 of simple continued fever, 29 of diphtheria, 27 of erysipelas, 7 of puerperal fever, and 5 of membranous croup were notified. There were 55 deaths from zymotic disease, 70 from phthisis, and 172 from diseases of the respiratory organs. The annual death-rate from all causes was 25·6, that for children under one year old 6·1, and that for those of sixty years and upwards 4·5 per 1000 of the inhabitants. The notifications of typhoid fever during the four weeks were less than half of those noted in the report presented on Dec. 1st. Scarlet fever is now rife in Belfast, but of a mild type. In the introductory address (at the first meeting of the council this year) the Lord Mayor (Sir James Henderson) stated that in 1897 the money spent in the Public Health Department was £17,746, while for 1899 the estimate is £29,475—a great and necessary increase.

The Meteorology of 1898.

During the year 1898 the total rainfall in the north of Ireland was 39·34 inches, the average for the previous fourteen years being 34·80 inches. Rain fell on 228 days. February was the wettest month (5·05 inches), September coming next (5·01 inches). The day on which there was the greatest rainfall (1·47 inches) was Nov. 23rd. The mean temperature was highest in August (59° F.) and it was lowest during February (40·6° F.). These statistics are from a record made at Coleraine.

The Battle of the Clubs at Cork.

The mayor of Cork and Mr. Long, chairman of the Queenstown Town Commissioners, have written jointly to the secretary of the Cork Medical Association stating that they would render assistance in settling the dispute between the medical men of the city and the clubs and adding that it would afford them pleasure to discuss the situation with a deputation appointed by the profession. The medical association, though aware that Mr. Long held the position of Grand Master of the Oddfellows of the South of Ireland and that he was therefore in a sense an interested party, decided that in all courtesy they should act on the suggestion conveyed to them, and accordingly Professor S. O'Sullivan and Dr. Edward Magner were appointed delegates. During the conference Mr. Long suggested the following terms: that the only remaining imported club medical officer should resign his clubs but be eligible for re-election; that instead of the original medical officers of the clubs being reinstated the club appointments should be open to competition; and that the imported medical man should be met in consultation by members of the profession in Cork. The medical delegates then stated that the proposal to throw the club appointments open to competition could not be entertained, as it would imply the desertion by the medical association of the club medical officers who had resigned those appointments in the interests of the profession at large. The delegates further added that under no possible combination of circumstances would the members of the Cork Medical Association consent to meet the imported medical man either professionally or socially. There is no doubt that one of the best strategic moves made by the profession in Cork has been the formation of the Cork Medical Benefit Association which although only in its infancy has had a successful career, as proved by the balance-sheet recently issued. One of the fundamental rules of this association is that no one having an income of over £100 a year shall be eligible for membership.

Jan. 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Hospital Physicians and Alcoholism.

AT the meeting of the Hospitals Medical Society held on Dec. 15th M. Legendre, alarmed by the ever-increasing amount of drunkenness, asked if it would not be possible to withstand this by means of meetings, insistence on the dangers of alcohol, and by what he considered an even better method, that of getting up for the instruction of patients lantern shows with exhibitions of anatomical preparations to show the dangers of alcohol. M. Legendre has had printed for the use of all his patients a litle leaflet setting forth in the clearest manner the evils which follow the use of alcohol. He gives one of these to every patient of his both on admission to hospital and when he is discharged. Besides this he has had them stuck up all over his wards and even in the lavatories as being quiet places where the patients will have leisure to read them with the object of bringing about a veritable obsession against alcohol. The text runs as follows: "Most of the diseases treated in the hospitals arise from alcoholic drinks—that is to say, they are either caused or aggravated by the abuse of alcohol. All alcoholic drinks are dangerous, and the most harmful are those which contain aromatics in addition to alcohol—as, for instance, *absinthe* and the so-called aperients called *ainers*. Alcoholic drinks are more dangerous when taken on an empty stomach or between meals. A man necessarily becomes an alcoholic—i.e., slowly poisoned by alcohol—even if he never gets drunk, when every day he drinks alcohol in the form of liqueur or too much wine, more than one litre per diem. Alcohol is a poison the habitual use of which destroys more or less quickly, but none the less certainly, all the organs most necessary to life—the stomach, the liver, the kidneys, the blood-vessels, the heart, and the brain. Alcohol excites man but does not strengthen him. It is no substitute for food, but takes away the taste for it. Those who often drink alcohol or too much wine (more than one litre a day) are much more liable to illness, and when ill are much worse, for the disease is often complicated with fatal delirium. Alcohol is a frequent cause of consumption by its power of weakening the lungs. Every year we see patients who attend the hospitals for alcoholism come back some months later suffering from consumption. Fathers and mothers who drink often have children who are deformed or idiots or who die from fits."

The Broca Hospital.

On Dec. 21st the President of the Republic visited the Broca Hospital. He was received by the officials and heads of the various departments. The building, of which the very look is distressing, is in a most deplorable condition, being very deficient not only as regards its hygienic state, but even in regard to matters of ordinary decency. The wards are all very low and the paint and plaster are peeling off the walls. So the whole of the medical staff greeted M. Faure on his arrival with protests and complaints. With one voice the staff demanded that the building should be razed. Unfortunately the Broca Hospital is not the only one in this condition, for there are quite a dozen others in a like state. M. Faure, however, soon left this portion of the hospital and passed on to inspect the new Pascal block which is devoted to the department presided over by M. Pozzi. The official architect in his plans only carried out the ideas of M. Pozzi. The walls of the wards are covered with pictures and frescoes signed by such artists as Clairin, Lauzet, Girard, and Dubeuf, and M. Pozzi

superintended the building day by day as it progressed. The building is entirely given up to the diseases of women. The building includes three distinct departments, but all these communicate freely with one another. There are rooms for consultations, the wards for the patients, a theatre, and operating rooms. The consultation rooms consist of a large waiting-hall from which a passage leads to a room for examination, an electrical department, and a room for massage. There are also a cloak-room for students, a private room for the surgeon, and rooms for douches, dressings, and speculum cases. 4 wards are allotted to hospital patients, 3 of which are gynæcological and 1 is reserved for syphilitic obstetric cases. There are also isolation wards with 1 or 2 beds and 1 special isolation ward for infectious cases. Altogether there are 66 beds. For lectures and operations there is a large theatre which also serves as an operating theatre for septic cases; but besides this there is another operating theatre, a sterilising room with the instrument cabinet, and an anæsthetising room. The floors throughout are tiled and not floored with planking, while the walls are covered with an unchangeable plaster. Heating is carried out by means of low-pressure steam apparatus and the electric light is supplied. The wards all look into the gardens. Every article of furniture is of iron, wood, and porcelain and will all take to pieces for sterilisation. The total cost was 440,000 francs, this being the amount originally allotted for expenses. 128,000 francs were allotted for the waiting-rooms, the remainder of the building and the theatre coming to 312,000 francs. Thus 66 beds were provided at a cost of about 4800 francs per bed—very little considering that in the most modern hospital, the Hôpital Boucicaut, the amount per bed will be 18,750 francs.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Iodoformogen.

OF the numerous chemical compounds manufactured commercially as substitutes for iodoform the greater part have proved to be of little value, and in spite of its unpleasant odour and its irritating action on the skin iodoform has for many years maintained its position as the most energetic of the antiseptic powders. Messrs. Knoll and Co., manufacturing chemists at Ludwigshafen, have, however, succeeded in producing a combination of iodoform with albumin which is in some respects superior to ordinary iodoform and is termed iodoformogen. It contains 10 per cent. of iodoform, has a yellow colour, may be sterilised at 105° C. (221° F.) without undergoing any alteration, is not soluble in water, and has hardly any smell. In addition to this it is more than three times lighter than iodoform and is lower in price. Dr. Wagner of the Stuttgart Hospital states in the *Münchener Medicinische Wochenschrift* that neither eczema nor toxic symptoms have occurred when it has been used. Eczema even disappeared when treated with iodoformogen. There is very little danger of it causing toxic symptoms as it contains only 10 per cent. of iodoform which owing to its combination with albumin is absorbed but slowly. The new preparation therefore seems to possess several distinct advantages.

Carbolic Acid Injections in Anthrax.

An interesting case of anthrax has been described in he *Münchener Medicinische Wochenschrift* by Dr. Strubell of the University Hospital of Jena. The patient was a tanner, forty-one years of age. Six days before coming under observation he observed on the tip of his nose a small blister which very soon became black. He continued at work till the day of his admission to hospital when he was seized with rigors and feverish symptoms. On his arrival at the hospital the lower part of his nose was extremely swollen, the skin was gangrenous, and there was marked infiltration of the surrounding parts. Typical bacilli of anthrax were present in the secretion of the nose. All the submaxillary glands were swollen and the spleen was enlarged. No bacilli, however, could be found in the blood and inoculations of mice and guinea-pigs with the blood had no result. Owing to the unfavourable state of the patient no operation was performed, but, as suggested by Russian observers, injections of a 3 per cent. solution of carbolic acid were made into the necrotic tissue of the nose, the surrounding tissues, and the infiltrated glands. Hot poultices at a temperature of from 50° to 55° C. (from 122° to 131° F.) were also applied night and day, being changed every ten minutes. Under this treatment the man's condition became better, so that within ten days a line of demarcation was formed between the tip of the nose and the surrounding tissues. The injections, however, were continued as the œdema had extended to the clavicles and there was therefore a possibility of general septicæmia supervening. After three weeks the infiltration at last stopped and the glands decreased, so that the injection was no longer necessary. The tip of the nose healed up with only very slight cicatrisations. The case is very interesting both on account of the unusual position of the lesion and also on account of the favourable issue. Although the prognosis was unfavourable conservative treatment succeeded in saving the patient. If an operation had been performed the result would certainly have been mutilation of the patient's face by resection of the nose, whilst under the injections healing took place without this disfigurement. The patient had more than 400 injections of 1 gramme of a 3 per cent. solution of carbolic acid without any toxic symptoms being produced. Dr. Strubell is of opinion that the hot poultices assisted in destroying the anthrax bacilli, for it is known that the latter are killed by a temperature of 42° C.

A Surgeon Charged with Neglect.

Some of the difficulties connected with surgical practice are very well illustrated by the following case quoted in the *Aerztliche Sachverständige Zeitung*. An intoxicated working man was wounded in the neck in a scuffle and was brought to a surgeon who dressed the wounds and attended him for ten days in his (the patient's) residence. As the man's state became worse he was taken to a hospital where paresis of the right arm and motor aphasia were recognised. Seven days after admission trephining was performed and led to the discovery of a broken knife-blade which had perforated the dura mater and was fixed in the skull. Round the blade there was an abscess which increased in size after the removal of the foreign body and finally led to a fatal issue. The surgeon who had first attended the case was prosecuted for professional neglect and two other surgeons had to appear as experts before the court. They were asked by the prosecution (1) whether the defendant had sufficiently examined the wounds, and (2) whether if the blade had been at once removed from the skull the patient's life would have been saved. The answers to these questions were as follows—first, that there was no reason to believe that the surgeon had not sufficiently examined the wound, as he had not been informed that a knife had been used in the fight, and that even if he had introduced a probe into the wound there was little probability that the blade would have been detected as it was inside the skull; secondly, that even if the blade had been removed earlier the patient would probably have died, the knife not being free from pyogenic germs. The court agreed with the opinions of the expert witnesses and a verdict of "Not guilty" was returned.

Jan. 1st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Public Hygiene.

THE year opens reassuringly for the "salus populi." I have had occasion to draw attention to the fact that zymotic and epidemic disease is never quite absent from Italy, mainly owing to the abject impecuniosity of the communes which are thus unable to afford the sanitary measures prescribed by sound hygiene. These communes are expected to carry out the provisions of the "Legge Sanitaria," but their predicament is simply that of "non possumus"—"our poverty but not our will consents." The Government, appealed to, like Hercules, to lift the sanitary machine out of the rut, pleads in its turn "non possumus" and protests that it has not at its disposal the funds needed for the prophylaxis of the whole kingdom. There are 8263 communes in Italy (mainland and islands) and the Ministry of the Interior has only 8000 lire Italiane set apart for prophylactic purposes—little over 6*d.* for each commune. In October last the Premier (General Pelloux) who is also Minister of the Interior promised to devise some means for palliating, if

not removing, the scandal, and this promise he has just taken the first steps to fulfil. The "means" in contemplation are facilitated borrowing powers granted to the impecunious communes; and the Senator Majorana Angelo, commissioned to report on the subject, has just presented his "relazione" for distribution among the Members of Parliament. The Government, according to this document, will contribute 2 per cent. to the interest payable by loan-contracting communes of less than 100,000 inhabitants for sanitary works costing over 20,000 lire and will contribute 1½ per cent. for loans contracted by any commune whatever, provided the said loans are required for "acqua potabile" (pure drinking water in sufficient quantity). This is a step in the right direction, though but a little one, and helps to make us understand how panic-stricken Italian Governments must be at the threatened failure of any source of revenue—such, for example, as the falling-off in English-speaking visitors which the boycotting of English-speaking practitioners would inevitably entail.

Pro Pueritia.

Under this title the sub-Alpine capital is carrying on a crusade similar to that conducted in Rome and Florence "Pro Infantia"—a crusade on behalf of children of tender years neglected or abandoned by their parents. The Turin society organised for this purpose has just issued its programme the leading points of which I translate: "The society, with the support of the local authorities and committees of benevolence, seeks out such children of both sexes as have been morally or materially abandoned; assists on every due occasion the children it protects with clothing, with food, and with medicine; facilitates according to circumstances their admission into the various local institutes destined for the accommodation, care, or education of poor or sickly childhood; and protects in the last resort the said children from maltreatment, violence, or abuse, calling in if need be the intervention of the public authority and having recourse, as circumstances render advisable, to the action of the tribunals and the administration of the law." I hope to have occasion from time to time to "report progress" as to these efforts for rehabilitating Italian infancy—efforts certainly serious, well devised, and liberally maintained.

Honours to Italian Physicians.

From St. Petersburg I am informed that the Russian Academy of Medicine on the occasion of celebrating its centenary has conferred its honorary membership on his Excellency Dr. Guido Baccelli, Minister of Public Instruction, and Dr. Camillo Golgi, LL.D. Cantab., Professor of General Pathology in the University of Pavia.

Jan. 1st.

Obituary.

DONALD CAMPBELL BLACK, M.D., F.F.P.S. GLASG., L.R.C.S. EDIN.

DR. CAMPBELL BLACK who died very suddenly on Dec. 20th at his house in Douglas-street, Blythswood-square, Glasgow, was not only a conspicuous figure in medical circles in that city, but had by his writings and otherwise acquired a certain kind of celebrity throughout the whole of Scotland. A clever man, a good scholar, fluent both with his pen and on the platform, industrious, persevering, altogether devoid of fear, and capable of making some firm friendships, he seemed to be endowed with all the qualities which lead to success, but his prime failings were a constitutional imperviousness to argument and an undue development of the controversial spirit. He received his medical education principally at Glasgow University where he graduated as M.D. in 1862, taking the Licence of the Royal College of Surgeons of Edinburgh in 1867. For some years he was an assistant physician to the Glasgow Royal Infirmary, and about seven years ago was appointed professor of physiology in Anderson's College Medical School in the same city. The wisdom of the selection was not very apparent, for Dr. Black did not always look with most favour on the newest views and he had for more than twenty years been a most vehement and outspoken opponent of the germ theory of disease and of the use of antiseptic methods in surgery. In July, 1897, the governing body of the school saw fit to declare the chair vacant, an exercise of authority against which Dr. Black protested vigorously. The best known of his published works were "The Functional Diseases of the Urinary and Reproductive Organs (reviewed in THE LANCET of Nov. 8th, 1873), and "Lectures on Bright's Disease" (reviewed in THE LANCET of July 28th, 1877). His first communication to THE LANCET was a letter on Medical Titles, published on August 9th, 1862, since which time four original articles and various letters by him have appeared in our columns. Dr. Black was born at Oban in 1843 and all his life took a great interest in Gaelic literature. On Nov. 18th last, as mentioned in THE LANCET of Nov. 26th, he was presented by some friends with his portrait painted in oils. At the time of his death he was president of the Glasgow Gaelic Society and a director of the Glasgow Celtic Society.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examination have been admitted Licentiates in Dental Surgery and have received their diplomas:—

Balding, Leonard Montague.
Bell, Arthur Osborne.
Belsey, Herbert Henry.
Besford, Harry Newton.
Bradburn, Frederick James.
Campkin, Percival Sidney.
Charnock, Harry.
Cohen, Isaac.
Crombie, Walter Paterson, M.B.
Dowling, Edward Alfred Griffiths.
Evans, Harry Hudson.
Farnfield, John Stewart.
Fleetwood, Leonard Montague.
Harrison, William Cecil.
Hawthorn, Henry William John.
Huckle, Claud Hamilton.
Jessop, Charles Ferdinand.
Mason, Edgar.
Mason, Ernest Noel.
Mitchell, Arthur.
Must, William Henry.
Payne, Archibald Gates.
Peach, William Frank.
Phillips, William Herbert.
Read, Walton Rix.
Roberts, Alfred William.
Rose, Henry.
Sherratt, Benjamin.
Shorrock, John Isherwood.
Smallwood, George Valentine.
Smith, Percy Lambert.
Stelfox, Walter Edmund.
Thomas, William Hendy.
Wolter, Ernest Alfred.
Wood, Bryan Jardine.

Twenty-six gentlemen were referred to their professional studies for six months.

SOCIETY OF APOTHECARIES OF LONDON.—In December the following candidates passed in the subjects indicated:—

Surgery.—W. F. E. Ashton, Birmingham; E. U. Bartholomew Charing-cross Hospital; W. H. I. Bathurst (Section II.), London Hospital; C. T. Bishop (Sections I. and II.), Charing-cross Hospital; C. G. Catterall (Sections I. and II.), Leeds and Westminster Hospital; G. J. D. Davies, Leeds; H. Fawcett, Cambridge and London Hospital; P. T. Goodman, St. Thomas's Hospital; A. H. Safford, King's College Hospital; T. J. Vick, Guy's Hospital; and C. Welch, London Hospital.

Medicine.—G. Aldridge, London Hospital; W. F. E. Ashton, Birmingham; W. H. I. Bathurst (Section II.), London Hospital; W. F. C. Bennett (Section I.), Sheffield; C. T. Bishop (Sections I. and II.), Charing-cross Hospital; R. Brookes (Section I.), Westminster Hospital; F. W. Chesnaye (Section I.), St. George's Hospital; L. D. B. Cogan and A. G. C. Davies (Section II.), Guy's Hospital; W. T. Davies, London Hospital; T. A. E. Fawcett (Section I.), Leeds; J. E. Griffith, St. Bartholomew's Hospital; D. V. Lowndes (Section I.), Westminster Hospital; and E. P. Marett, St Thomas's Hospital.

Forensic Medicine.—W. F. E. Ashton, Birmingham; W. F. C. Bennett, Sheffield; C. T. Bishop, Charing-cross Hospital; R. Brookes, Westminster Hospital; L. D. B. Cogan, Guy's Hospital; H. H. Cotman, Aberdeen and London Hospital; W. T. Davies, London Hospital; T. A. E. Fawcett, Leeds; J. E. Griffith, St. Bartholomew's Hospital; and D. V. Lowndes, Westminster Hospital.

Midwifery.—W. Archer, Leeds; W. F. C. Bennett, Sheffield; C. T. Bishop, Charing-cross Hospital; H. N. Collier, Guy's Hospital; S. E. Dunkin, Charing-cross Hospital; F. Elias, London Hospital; C. Fisher, St. Bartholomew's Hospital; M. P. Gabe, Middlesex Hospital; W. H. Gale, St. Thomas's Hospital; T. R. Griffiths, University College Hospital; T. B. Haig, St. Bartholomew's Hospital; J. Jones, Edinburgh; R. O. Jones, and E. MacD. Judge, Guy's, Hospital; R. A. Lyster, Birmingham; and W. A. Sugden, St. Mary's Hospital.

The Diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery: Messrs. W. F. E. Ashton, E. U. Bartholomew, W. H. I. Bathurst, C. T. Bishop, C. G. Catterall, L. D. B. Cogan, G. J. D. Davies, W. T. Davies, P. T. Goodman, T. J. Vick, and C. Welch.

UNIVERSITY OF CAMBRIDGE.—The following candidates were successful at the examinations for medical and surgical degrees Michaelmas term:—

FIRST EXAMINATION.

Part I. Chemistry and Physics.—C. A. Anderson, B.A., Trinity; H. M. Aviss, Downing; A. S. B. Bankart, Trinity; E. Bell, Clare;

H. Breakey, Jesus; W. T. Briscoe, H. Selwyn; E. M. Brown, Pembroke; H. M. Clarke, Clare; G. C. Compton, Caius; H. P. Crampton, Clare; J. M. Cunningham, Trinity; S. H. Daukes, Caius; H. M. Davies and L. G. Davies, Trinity; H. S. Dickson, Christ's; K. V. Elphinston, Trinity; A. H. Fardon, Christ's; A. T. Field, Emmanuel; H. N. Fink, B.A., Trinity Hall; J. M. Hamill, Trinity; H. Hardwick-Smith, St. John's; S. A. Henry and G. L. Hodgkin, Trinity; W. R. Honeyburne, Peterhouse; W. G. Howarth, King's; A. B. Howitt and E. C. Hughes, Clare; W. E. Hume, Pembroke; J. H. Iles, Caius; H. B. Jackson, Clare; F. A. G. Jeans, St. John's; C. King, Trinity; H. E. Kitchen, Sidney-Sussex; J. Lambert, Down; H. R. Lawrence, Pembroke; R. O. Lee, B.A., Emmanuel; K. Lucas, Trinity; J. Mellanby, Emmanuel; E. S. Montagu, Trinity; W. H. Newton, Emmanuel; H. E. H. Oakeley, B.A., St. John's; J. A. A. Orlebar, Magdalene; P. R. Parkinson and C. F. Parry, Caius; N. C. Patrick, B.A., Christ's; L. T. Penman, King's; R. N. Poignand and F. P. Roberts, Caius; E. S. Scott, B.A., Pembroke; L. Shingleton-Smith, St. John's; F. F. Shout, Caius; W. H. Smyth, Emmanuel; P. S. Stephens, Trinity; W. H. R. Streatfeild, Queen's; D. W. Tacey, Christ's; F. C. Trapnell, King's; J. H. Trench and J. D. C. White, M.A., Trinity; R. G. Wills, St. John's; and C. J. Wilson, Christ's.

Part II. Elementary Biology.—J. D. Barris, Caius; E. Bell, Clare; A. D. Brunwin, Trinity; S. H. Daukes, Caius; H. J. Fardon, Christ's; H. N. Fink, B.A., Trinity Hall; H. U. Gould, B.A., Trinity; R. E. G. Grey, Pembroke; J. M. H. Hamill, W. H. Hastings, and G. L. Hodgkin, Trinity; W. G. Howarth, King's; A. B. Howitt and H. B. Jackson, Clare; F. A. Juler, Trinity; J. Mellanby, Emmanuel; E. S. Montagu, Trinity; W. S. Neave, B.A., St. John's; G. W. de P. Nicholson, Jesus; H. E. H. Oakeley, B.A., St. John's; J. A. A. Orlebar, Magdalene; R. Puttock, Emmanuel; F. P. Roberts, Caius; E. S. Scott, B.A., Pembroke; G. H. Shepley and L. Shingleton-Smith, St. John's; W. H. Simpson, Caius; H. A. Smith, H. Selwyn; W. H. Smyth, Emmanuel; E. L. T. Taylor and S. H. S. Taylor, Caius; F. C. Trapnell, King's; J. H. Trench, Trinity; C. J. Wilson, Christ's; and N. Wilson, Pembroke.

SECOND EXAMINATION.

Part I. Pharmaceutical Chemistry.—C. E. A. Armitage, Emmanuel; A. E. Barclay, B.A., Christ's; H. W. Bayly, M.A., Clare; G. F. Bird, Trinity; W. F. Blandford, Peterhouse; A. S. Bradley, B.A., Caius; M. B. Briggs, St. John's; P. J. Burgess, B.A., Sidney-Sussex; N. C. Carver, B.A., King's; J. G. Castellain, Trinity; D. H. Collingham, King's; L. Courtauld, B.A., Trinity; R. M. Courtauld, Pembroke; W. B. Crowfoot, Emmanuel; C. W. Cunnington non-collegiate; H. F. Curl, Christ's; T. R. Elliott, Trinity; E. A. Ellis, Downing; G. R. Footner, Pembroke; L. H. Frankenburg, Emmanuel; E. Gardiner, Caius; B. C. Ghosh, B.A., St. John's; C. B. Goulden, non-collegiate; M. F. Grant, Trinity; G. H. Harper-Smith, Caius; R. T. Harris, Christ's; Everard Harrison, Trinity; R. N. Hart, Sidney-Sussex; A. G. Harvey, B.A., St. John's; W. R. Higgins, Caius; T. W. S. Hills, Downing; G. G. Hirst, Caius; H. D. Hoffman, B.A., and H. M. Joseph, Trinity; A. E. Kerr, Christ's; A. S. Littlejohns, Caius; T. C. Lucas, B.A., Clare; F. M. Matheson, Caius; C. W. P. Moffatt, Clare; W. M. Mollison, King's; R. F. Moore, Christ's; A. L. Murison, B.A., Trinity; W. L. Murphy, St. John's; C. L. Nedwill, B.A., and W. H. Orton, Trinity; H. I. Pinches, Sidney-Sussex; C. T. M. Plowright, St. John's; G. L. Ranking, Pembroke; R. Rees, Downing; W. T. Scott and J. G. Slade, B.A., Clare; T. Somerville, Emmanuel; J. M. Stenhouse, Sidney-Sussex; H. T. Thompson, Christ's; G. A. Ticehurst, St. John's; G. A. Weir, B.A., and C. F. O. White, Trinity; F. L. Woods, Caius; and R. A. Worthington, Clare.

Part II. Human Anatomy and Physiology.—J. A. Andrews, B.A., St. John's; L. B. Aveling, B.A., Christ's; G. D. Barton, B.A., Pembroke; J. M. Bennion, B.A., St. John's; E. Bigg, B.A., Caius; A. P. Bowdler, B.A., Sidney-Sussex; H. S. D. Browne, B.A., and C. V. Bulstrode, B.A., Trinity; H. O. Butler, B.A., Emmanuel; E. J. Buttar, B.A., Pembroke; J. F. H. Dally, B.A., St. John's; G. W. Deeping, B.A., Trinity; B. J. Dudley, B.A., H. Selwyn; W. S. Fox, B.A., Trinity; H. T. George, B.A., Caius; H. Gordon-Smith, B.A., Trinity; T. Guthrie, King's; E. F. G. T. Heap, Sidney-Sussex; W. Hill, B.A., Emmanuel; A. C. Hudson, B.A., Trinity; K. Kellie, B.A., Caius; G. A. Kempthorne, B.A., St. John's; E. H. Kitchin, B.A., Downing; G. E. Lovelay, B.A., and G. Lucas, Caius; F. B. Manser, Peterhouse; H. W. Masterman, B.A., Christ's; J. C. Matthews, Downing; F. H. Parker, B.A., Pembroke; D. Pennington, B.A., Caius; F. Richmond, Clare; J. W. Rob, B.A., St. John's; H. Robinson, Trinity; T. St Clair-Smith, B.A., Trinity Hall; A. M. Simpson, King's; R. D. Smedley, B.A., Pembroke; B. Spearman and H. Spurrier, B.A., Caius; A. H. Style, B.A., Emmanuel; B. L. Thurlow, Caius; G. L. Tuck, Emmanuel; J. Wharton, B.A., St. John's; H. L. Wilson, B.A., H. Selwyn; V. J. Woolley, King's; and A. Wylie, B.A., Pembroke.

Dr. A. C. Haddon, Dr. Seligmann, and Mr. S. H. Ray, members of the Cambridge Anthropological Expedition, arrived at Hong-Kong on Nov. 29th last with interesting ethnological collections and photographs.

LITERARY INTELLIGENCE.—The first number of the *Zeitschrift für Augenheilkunde* will be issued in January by Mr. S. Karger, medical publisher, Berlin, N.W. The editors will be Professor Kuhnt of Königsberg and Professor Michel of Würzburg. The journal will be in monthly parts of about 80 pages with numerous engravings in the text and plates. Six parts will form a volume. The annual subscription (two volumes) is 30 marks. The original articles in Part I. will be (1) on the Value of Mechanical Methods in the Treatment of Conjunctivitis Granulosa; (2) on the Sub-conjunctival Injection of Chloride of Sodium in Choroiditis in Macula; (3) on Acute Poisoning by Methyl Alcohol; and (4) on the Occurrence of Acute Pneumococcus Conjunctivitis.

DIPHTHERIA AT SWANSEA.—Mr. E. Davies, medical officer of health of Swansea, has recommended the closure of the schools of that town until Jan. 16th, owing to the epidemic of diphtheria.

APPOINTMENT OF A BACTERIOLOGIST. — At the quarterly meeting of the Glamorganshire County Council held on Dec. 29th, 1898, Mr. Thomas Bowhill of Edinburgh was elected bacteriologist for the county.

PRESENTATIONS TO MEDICAL MEN. — At the annual dinner of the Bolton and District Association of Colliery Surgeons at Walkden on Dec. 22nd, the honorary secretary, Mr. J. H. Marsh of Little Hulton, was presented with a punch-bowl and a silver tea-service as a token of appreciation of his services as organiser of the association which has for its object the union of the colliery surgeons of the district.—A large and representative gathering of residents in the county of Linlithgow assembled at St. Catherine's, Linlithgow, on Dec. 24th to present Dr. James Hunter with a brougham carriage, horse, and harness as a token of the great esteem in which he is held by the community.

CORNISH GUARDIANS AND THE VACCINATION ACT.—At a meeting of the Bodmin Board of Guardians held on Dec. 24th it was decided that the vaccination fees should range according to distance from 7*s.* 6*d.* to 9*s.* for each successful case beyond the one-mile limit and 1*s.* for visit at the house when vaccination did not take place.—The Camelford Board of Guardians have come to an arrangement with their medical officer whereby the fees for vaccination are 5*s.*, 6*s.*, and 7*s.* according to distance.—At a meeting of the Helston Board of Guardians held on Dec. 24th by a large majority it was decided to petition the Government to repeal the new Vaccination Act next session.

BOOKS, ETC., RECEIVED.

ALCAN, FÉLIX, Paris.
Chirurgie du Cœur et du Péricarde. Par F. Ferrier et E. Reymond 1898.

BAUERMEISTER, F., Glasgow.
Zur Lehre von den Geschwülsten und Infections-Krankheiten. Von P. Lengemann, Th. Rosatzin, und O. Lubarsch. 1899.
Die Neurologie des Auges. Von H. Wilbrand und A. Saenger. Erster Band. 1899.
Diagnose und Therapie der Nervosen Frauenkrankheiten infolge gestörter Mechanik der Sexual-Organe. Von Dr. M. Krantz. 1899.

BLACK, ADAM AND CHAS., Soho-square, London.
Who's Who. 1899. Edited by D. Sladen. Fifty-first year of issue. Price 3*s.* 6*d.* net.

BLACKWOOD, W., AND SONS, London and Edinburgh.
The Good Regent: a Chronicle Play. By Professor Sir T. G. Stewart, M.D., LL.D. 1898. Price 6*s.*

CARRÉ, GEORGES, ET C. NAUD, Paris.
Traitement des Dermatoses. Par L. Brocq. 1898.

CASSELL AND COMPANY, London.
Potsherds. By Mabel C. Birchenough. 1898.

CHATTO AND WINDUS, St. Martin's-lane, London.
Herbert Fry's Royal Guide to the London Charities. Edited by John Lane. Thirty-fifth Annual Edition. 1898. Price 1*s.* 6*d.*

CHURCHILL, J. & A., Great Marlborough-street, London.
Holden's Human Osteology. Edited by C. Stewart, F.R.S., and R. W. Reid, M.D., F.R.C.S. Eighth Edition. 1899. Price 16*s.*

CHURCHILL, J. & A., London; and G. P. PUTNAM'S SONS, New York.
Manual of Diseases of the Skin. By L. D. Bulkley, M.D. Fourth Edition. 1899.

CROSBY LOCKWOOD AND SON, Stationers' Hall-court, Ludgate-hill, London.
The Purification of Sewage. By Sidney Barwise, M.D. Lond. 1899. Price *s.*

DORNAN, W. J., Philadelphia.
Transactions of the Pathological Society of Philadelphia. Vol. XVIII. Edited by W. S. Carter, M.D. 1898.

DU BOISTEL, G. AND CO., Broad-street House, London, E.C.
Notes on Essential Oils, with special reference to their composition chemistry, and analysis. By T. H. W. Idris, F.C.S. 1898.

FROWDE, H., Amen-corner, London.
The Micro-organism of Faulty Rum. By V. H. Veley, M.A., F.R.S., and L. L. Veley. 1898. Price 5*s.* net.

GAUTHIER-VILLARS, Paris.
Traité Pratique de Radiographie et de Radioscopie. Par A. Londe. 1898.

GEROLD'S, CARL, SOHN, Wien.
Ueber die Beulenpest in Bombay im Jahre, 1897. Theil I. Unda II. A. 1898. Price £5 11s. 7d.

GOVERNMENT PRINTING OFFICE, Washington.
Index-Catalogue of the Library of the Surgeon-General's Office, United States Army: Authors and Subjects. Second Series. Vol. III., C—Czypan. 1898.

INSTITUT DE BIBLIOGRAPHIE SCIENTIFIQUE, Paris.
La Suture Intestinale. Par F. Terrier et M. Baudouin. 1898.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., Charing-cross-road, London.
General Nursing. By Eva C. E. Luckes. 1898. Price 5s.

KIMPTON, H., High Holborn, London.
Diseases of Women: a Treatise on the Principles and Practice of Gynæcology. By E. C. Dudley, A.M., M.D. Illustrated. 1898. Price 21s. net.
A Manual of Otology. By Gorham Bacon, M.D. With an Introduction by C. J. Blake, M.D. Illustrated. 1899. Price 9s. net.

LEHMANN, J. F., München.
Atlas der Haut-Krankheiten mit einem Grundriss der Pathologie und Therapie derselben. Von Professor F. Mracek in Wien. 1899.

MACDOUGALL, A., Mitchell-street, Glasgow.
Transactions of the Glasgow Obstetrical and Gynæcological Society Vol. I. Sessions 1896–97, 1897–98.

MASSON ET CIE., Paris.
Traité de Microbiologie. Par E. Duclaux. Tome II. 1899.

MAYNE AND BOYD, Corporation-street, Belfast.
The Erection of a Consumptive Sanatorium for the People. By Dr. Nahm. Translated by W. Calwell, M.A., M.D. 1898. Price 2s. net.

SAMPSON LOW, MARSTON, AND CO., Fetter-lane, Fleet-street, London.
Manual of First Aid. By J. A. Austin, M.D. Illustrated. 1898.
The Voice of the Spirit. By H. Swan. Books III. and IV. 1898.
Twentieth Century Practice. Edited by T. L. Stedman, M.D. Vol. XV. Infectious Diseases. 1898.

SCIENTIFIC PRESS, Southampton-street, Strand, London.
Hospital Expenditure: the Commissariat. Reprinted from the *Hospital*. 1898. Price 2s. 6d.

SKIPPER, CHAS., AND EAST, Great Tower-street, London.
Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1897. By the Medical Registrars and the Surgical Registrar. 1899.

SMITH, ELDER AND CO., Waterloo-place, London.
Dictionary of National Biography. Edited by Sidney Lee. Vol. XVII. Tom—Tytler. 1899.

SWAN SONNENSCHEIN AND CO., Paternoster-square, London.
Willie: A Story of a Children's Hospital. By M. Calderford. 1899. Price 1s.

KEHMAN PUBLISHING COMPANY, Shaftesbury-avenue, London.
Atlas and Abstract of the Diseases of the Larynx. By Dr. L. Grünwald. Translated from the German. Edited by C. P. Grayson, M.D. Illustrated. 1898. Price 10s. 6d. net.
Atlas of Legal Medicine. By Dr. E. von Hofman. Translated from the German. Edited by F. Peterson, M.D., assisted by A. C. J. Kelly, M.D. Illustrated. 1898. Price 15s. net.
Atlas of Syphilis and the Venereal Diseases. By Professor Dr. F. Mracek. Translated from the German. Edited by L. B. Bangs, M.D. Illustrated. 1898. Price 15s. net.
Atlas and Epitome of Operative Surgery. By Dr. O. Zuckerkandl. Translated from the German. Edited by J. C. Dacosta, M.D. Illustrated. 1898. Price 12s. 6d. net.

TAYLOR AND FRANCIS, Fleet-street, London.
University College, London, Calendar. Session 1898-1899.

WARREN, W. M., Detroit.
Acromegaly. By G. Hinsdale, A.M., M.D. 1898.

WRIGHT, J., AND CO., Bristol.
The Treatment of Disease by Physical Methods. By T. S. Dowse, M.D. Aberd., F.R.C.P. Edin. 1898. Price 7s. 6d. net.

Before Goodnight: being a Little Story told to a Little Child. Vectis Brochure No. 3 (C. W. Deacon and Co., London), price 6d. (No author's name given).—Small Accumulators: How Made and Used; an Elementary Handbook. The Model Engineer Series. No. 1. Edited by P. Marshall. Illustrated (Dawbarn and Ward, Farringdon-avenue, London, E.C.), price 6d. net.—Various Pamphlets (14) from the Volta Bureau, for the Increase and Diffusion of Knowledge relating to the Deaf. Washington City, U.S.A. 1898.—Magazines, &c., for January: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, Humanitarian, St. Peter's Magazine, Quiver, Ladies' Field, Covent Garden Musical Annual, Tit Bits Monster Almanack, Home Magazine, Pears' Annual, World Christmas Number, Erasmic Annual.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ARKLE, G. M., L.S.A., has been appointed a Medical Officer for the Epileptic Institution at Belmont Grove, West Derby Union.
BARTER, WILLIAM, M.D., M.Ch., has been appointed Medical Officer for the employés of the London District, Great Central Railway.
BRISCOE, JOHN CHARLTON, M.R.C.S., L.R.C.P. Lond., has been appointed House Physician for King's College Hospital, London.
CAMPKIN, P. S., L.D.S. Eng., has been appointed Dental House Surgeon for Guy's Hospital, London.
COLLS, PERCY COOPER, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon for King's College Hospital, London.
DAVIES-JONES, D., M.B., M.S. Edin., has been appointed Surgeon for the Lower Duffryn Colliery, Mountain Ash.
DICKINSON, WM. LEE, M.D. Camb., L.R.C.P. Lond., has been appointed Lecturer in Toxicology and Forensic Medicine to St. George's Hospital Medical School.
EDEN, THOMAS WATTS, M.D. Edin., M.R.C.P. Lond., has been appointed an Assistant Obstetric Physician for the Charing-cross Hospital, London, vice Amand J. M. Routh.
GREAVES, FRANK, M.R.C.S., L.R.C.P., has been appointed House Surgeon for the Derbyshire Royal Infirmary, Derby, vice Percy Rycroft Lowe.
HENNESSY, D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer, *pro tem.*, for the Clonakilty Workhouse.
JEROME, ERNEST JOHN, L.R.C.P., L.R.C.S., L.M. Edin., has been re-appointed District Medical Officer of Health by the Camelford Rural District.
JONES, H. E., M.B., C.M. Glasg., has been appointed Dispensary Physician for the Glasgow Western Infirmary.
LEVICK, PERCY, B.A., M.B., B.C. Cantab., has been appointed House Surgeon for King's College Hospital, London.
LEWIS, COLTON TAYLOR, M.R.C.S., L.R.C.P. Lond., has been appointed House Accoucheur for King's College Hospital, London.
LYNCH, STEPHEN FREDERICK, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon for King's College Hospital, London.
MARSHALL, C. R., M.B. Camb., has been appointed to the new Chair of of Materia Medica, St. Andrews, vice W. H. de Wytt, retired.
MASON, E. N., L.D.S. Eng., has been appointed Dental House Surgeon for Guy's Hospital, London.
O'BRIEN, DANIEL PATRICK, F.R.C.S. Irel., has received an appointment in the Ravenswood Hospital, Queensland.
OGLE CYRIL, M.B. Oxon., M.R.C.P. Lond., has been appointed Lecturer in Practical Medicine to St. George's Hospital Medical School.
OWEN, ISAMBARD, M.D., F.R.C.P. Lond., has been appointed Joint Lecturer (with Dr. Ewart) in Systematic Medicine to St. George's Hospital Medical School, in succession to John Cavafy.
PARKES, WALTER C. C., D.P.H. Camb., has been appointed Professor of Hygiene for the Bedford College for Women.
PLUMLEY, M.B., L.R.C.P. Lond., M.R.C.S. Eng., L.D.S., has been appointed Dental House Surgeon for Guy's Hospital, London.
ROBERTS, GEORGE AUGUSTUS, M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Physician for King's College Hospital, London.
ROSS, MARION J., M.B., Ch.B. Glasg., has been appointed a Resident Medical Officer for the Workhouse by the Newcastle Guardians.
ST. JOHN, WINSTAN ST. ANDREW, M.R.C.S., L.R.C.P., has been appointed a House Physician for the Derbyshire Royal Infirmary, Derby, vice H. M. Tickell.
SAUNDERS, LEONARD DIMOCK, M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Accoucheur for King's College Hospital, London.
TENCH, MONTAGUE, M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the High Easter Sanitary District of the Dunmow Union.
WADE, CHARLES, L.R.C.P. Lond., M.R.C.S. Eng., has been re-appointed Medical Officer of Health for the Boscastle District by the Camelford (Cornwall) Rural District Council.
WEBSTER, T. L., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Medical Officer for the Walton Workhouse, West Derby Union.
WILSON, G. N., M.B., C.M. Aberd., has been appointed a Medical Officer for the Hebburn Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.
BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund-street, Birmingham.—House Surgeon. Appointment tenable to April 30th, 1899. Salary at the rate of £42 per annum, with board lodging, and washing.
BOARD OF GUARDIANS OF THE POOR OF THE PARISH OF ST. MARYLEBONE, London.—District Medical Officer for the Christ Church District of the parish. Salary commencing at £200 per annum. The appointment will be subject to statutory deductions. Applications to the Clerk to the Board, Guardians' Office, Northumberland-street, W.
BOSCOMBE HOSPITAL, Bournemouth.—House Surgeon. Salary £60 per annum, with board, lodging, and washing, but no beer or spirits.

COTSWOLD SANATORIUM FOR THE OPEN-AIR TREATMENT OF TUBERCULOSIS.—House Physician. Salary commencing at £80 per annum, with board, lodging, and washing. Applications to Dr. Pruen, Sherborne Lodge, Cheltenham.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary commences at £100 per annum, with prospect of increase to £250, with furnished apartments, board, attendance, and washing.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon for twelve months, unmarried. Salary £80. To reside and board in the hospital.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—House Surgeon. Salary £50 per annum, with board and washing.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's Buildings, Holborn, London.—Honorary Dental Surgeon. Also Resident Medical Officer. Salary £100 per annum, with apartments and attendance.

GENERAL HOSPITAL, Nottingham.—House Physician for two years. Salary £100, rising £10 a year to £120, with board, lodging, and washing.

LONDON FEVER HOSPITAL, Islington.—Assistant Physician.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant Surgeon.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury, London.—Pathologist. An annual honorarium of 50 guineas is given. Also House Physician. Salary £100 per annum.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant for at least one year. Salary £120 for the first year and £150 afterwards.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Assistant to House Surgeon for six months. Board, lodging, and washing provided.

ROYAL BERKS HOSPITAL, Reading.—Assistant Medical Officer for six months. Board, lodging, and washing provided. An honorarium of ten guineas will be given conditionally.

ROYAL LANCASTER INFIRMARY.—Certificated Dispenser. Salary £80 per annum.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant, for six months. Board and residence provided.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Senior Resident Medical Officer for one year. Salary £80 per annum, with residence in the hospital, board, and washing.

TYNEMOUTH VICTORIA JUBILEE INFIRMARY, Spring-gardens, North Shields.—Resident House Surgeon. Salary £120 per annum, of which £36 per year will be required for board, lodgings, and washing. Applications to the Secretary, 43, Howard-street, North Shields.

VICTORIA HOSPITAL, Burnley.—Resident Medical Officer. Salary £80, increasing by £10 per annum to £100, with board, &c.

Births, Marriages, and Deaths.

BIRTHS

BERRY.—On Dec. 25th, at Wansford House, Watford, the wife of F. Haycraft Berry, M.D., of a son.

MAUND.—On Dec. 25th, at Brackley House, Newmarket, the wife of John H. Maund, M.R.C.S., L.R.C.P. Lond., of a son.

MEYRICK-JONES.—On Dec. 30th, at Guilsborough, Northants, the wife of H. M. Meyrick-Jones, M.D., B.S., M.R.C.S., L.R.C.P., of a son.

PHILP.—On Dec. 30th, at Glenburn Hydropathic, Rothesay, N.B., the wife of W. C. Philp, L.R.C.P. and S.E., of a son.

THOMPSON.—On Dec. 31st, at Sunnymede, Muswell-hill-road, Highgate, the wife of George W. Thompson, M.B., of a son.

MARRIAGES.

BATEMAN—HIGHAM.—On Jan. 3rd, at S. Paul's Church, Bath, R. W. Bateman, Durham House, Bournemouth, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to Isabella Higham, widow of the late William H. Higham, Brereton, Dean-park, Bournemouth.

MADGE—PAUL.—On Jan. 4th, at St. George's, Hanover-square, Edward Douglas Madge, M.R.C.S., L.R.C.P., L.S.A., of Nottingham-place, W., to Annie Chaston Paul, eldest daughter of J. J. Dawson Paul, J.P., Eaton Grove, Norwich.

MILLS—BELL.—On Dec. 27th, at the Registrar's Office, Kensington, Herbert H. Mills, M.R.C.S., L.R.C.P., of St. Mary Abbot's-terrace, W., to Ernestine (Tina) daughter of the late Major Evans Bell, of Holland-park-avenue, W.

SIMMONS—MARTELL.—On Dec. 31st, at S. Margaret's, Lee, William Wickham Simmons, B.A., M.B., B.C. Camb., of Pinxton, Alfreton, Derbyshire, to Kate, youngest daughter of Benjamin Martell, The Briars, Lee-road, Blackheath.

DEATHS.

BRUCE.—On Jan. 2nd, at The Common, Ealing, Lewis Stanhope Bruce, Surgeon-General, late Bombay Army.

CLARKE.—On Dec. 22nd, at Ryde, Isle of Wight, John Say Clarke, M.D., in his 88th year.

JEFFREE.—On Jan. 3rd, at Howard Lodge, Clapham Park, John Jeffree, F.R.C.S., L.S.A., aged 78.

JOPP.—On Dec. 31st, at Albyn-terrace, Aberdeen, Keith Jopp, M.D., aged 81 years.

WICKHAM.—On Dec. 24th, at West Mead, Dawlish, Richard Henry Brenton Wickham, M.D., aged 54 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (9.30 A.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat (2 P.M.).

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College, (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.).

FRIDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (14th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (9th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Sir William Broadbent, Bart.: The Conduct of the Heart in the Face of Difficulties.

TUESDAY (10th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. J. Calvert: Aortic Aneurysm as a cause of Hypertrophy of the Left Ventricle.—Dr. H. G. Turney and Mr. C. A. Ballance: A Case of Aortic Aneurysm, Involvement of Sensory Nerve-roots, Sudden Paraplegia, Laminectomy, Death.

ROENTGEN SOCIETY (11, Chandos-street, Cavendish-square, W.).—8 P.M. Major J. Battersby, R.A.M.C.: The Present Position of the Rœntgen Rays in Military Surgery (illustrated by lantern slides).

WEDNESDAY (11th).—DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.). — 5.15 P.M. Clinical Demonstration.

SOUTH-WEST LONDON MEDICAL SOCIETY (Town Hall, Wandsworth, S.W.).—8.30 P.M. Dr. J. B. Ball: Paroxysmal Sneezing and Allied Affections, their Causes and Treatment.

HUNTERIAN SOCIETY.—8.30 P.M. Pathological Meeting. Specimens will be shown by Dr. Oliver, Mr. Targett, Dr. F. J. Smith, and other Fellows of the Society.

THURSDAY (12th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Annual Meeting for the Election of Officers. President's Address.

FRIDAY (13th).—SCHOOL DENTISTS' SOCIETY (Medical Society's Rooms, Chandos-street, Cavendish square, W.).—7 P.M. Casual Communications. Paper:—Mr. W. T. Elliott (Birmingham): Classification of the Ages of Childen for the purpose of Statistical Observation. Followed by discussion.

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (Offices of the Board of Works for the St. Giles District, 197, High Holborn, W.C.).—8 P.M. Dr. A. Newsholme (Brighton): The Prevention of Tuberculosis with Special Reference to Notification.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Clinical Evening. The following cases will be shown:—Mr. J. Hutchinson, jun.: Localised Myositis Ossificans from Injury.—Dr. Crawfurd: Enlarged Spleen with Thrill and Bruit.—Mr. Curtis: Anterior Displacement of Tuberculous Carpus with Formation of a False Joint (skiagrams and stereoscopic photographs by Dr. Mackenzie Davidson).—Dr. J. S. Richards: Pemphigus of the Mouth, Pharynx, Larynx, and Skin.—Dr. Batten: Progressive Muscular Atrophy after Measles.—Mr. Kellock: Two Cases of Complete Hypospadias with Cleft Scrotum.—Dr. Perkins: (1) A Case of Progressive Muscular Atrophy of Unusual Distribution; (2) A Case of Muscular Atrophy (Myopathic).—Mr. L. A. Dunn: Charcot's Disease of the Hip. And other cases. Patients will be in attendance at 8 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

THURSDAY (12th).—LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration to Senior Students.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. J. Mitchell Bruce: Cases in the Wards (Post-Graduate Class.)

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1898, which was completed with the issue of Dec. 31st, and the Title-page to the Volume, are given in this number of THE LANCET.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1898 will be ready shortly. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 6*d.*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

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A WORD TO OUR READERS.

WE publish this week an address from Dr. J. G. Glover who has been a Direct Representative of the profession upon the General Medical Council since 1886, in which year the principle of direct representation at the deliberations of the governing body of the profession was first conceded to the general practitioner as a practitioner apart from his position as a graduate or diplomate. We are glad to find that Dr. Glover in his address to his constituency does not share the general feeling of depression which seems to weigh down so many members of the medical profession. In the columns of THE LANCET, particularly in this department of the paper, we have often to note that in many directions there might be considerable improvement in the status of the medical practitioner, but nevertheless we hold that things are not only much better than they were, but also that they are much worse than they will be. Many abuses have grown strong of late that were weak or have crept in that were absent, but in spite of them we have to remember that the medical profession as a whole is in a much better plight than it was in fifty years ago and that simply no comparison can be instituted between its position now and that which it occupied a century ago, while there are signs on all hands that this favourable rate of progress is being maintained. A better educated class of men yearly aspire to become medical practitioners, while medical education is being perfected.

Seventy-five years ago, when THE LANCET was founded, consider what were the facilities for progress in the profession enjoyed by the medical man and for education enjoyed by the student. The medical man was protected by no laws worth speaking about from the entirely unqualified practitioner and from his student days was made to belong once and for all to the rank and file unless he possessed money or influence. A medical man in those days came to be a leader by paying high fees as the pupil of a leader with the understanding that he should enjoy a reversion of his master's offices. The number of men who not having these initial advantages became distinguished teachers or practitioners could be counted on the fingers of one hand. This senseless system has been entirely superseded and medical education is now so arranged that the best man should get the prizes. Whether the prizes are commensurate with the work which has to be expended to gain them is another question, and one that we do not enter into now. We propose during the next year, in response to communications from careful readers and valued friends, to endeavour to make these particular columns of THE LANCET more helpful to all general practitioners. Hitherto our answers to correspondents have been as a rule mainly useful to the particular correspondent; but the same difficulties constantly occur to medical men in different parts of the country and we are certain that if the questions asked us could sometimes be made public the replies would afford information which many would be glad to receive. May we therefore ask our readers to frame their questions as far as possible so that they can be published? This does not imply signature, although the name and address of the writer must be communicated to us. We at the same time seek the kind assistance of our readers. Many questions are necessarily put to us to which we cannot reply at once or with the fulness of detail which is desired by the questioners. In such cases we shall be always very grateful to any of our readers who can supply the gaps in our knowledge. By doing this they will be helping their brother practitioners who in turn may on another occasion be able to help them.

CONCURRENT ENTERIC FEVER AND TRICHINOSIS.

IN the *Deutsche Medicinische Wochenschrift* of Dec. 29th, 1898, Professor M. Fischer of Berlin relates the case of a journeyman butcher, twenty-four years of age, who contracted enteric fever and trichinosis simultaneously after partaking heartily of tainted pork, chopped and eaten raw. This meat was eaten on April 19th, 1862. On April 27th he was admitted into the Charité Hospital with all the signs of enteric fever and the disease ran a severe course. A bedsore as large as the palm of the hand formed over the sacrum and in removing the sloughs on Sept. 24th a piece of healthy muscle was cut away which was seen with the naked eye to be full of trichinæ. Under the microscope the parasites were seen to be quite close-set and everywhere encapsulated, the capsules being translucent and the parasites in motion. The patient's condition gradually became worse and he died from pleuro-pneumonia on Oct. 11th. At the post-mortem examination Peyer's patches in the ileum were found to be pigmented and cicatrised. In the lower portions some of them contained hardly any follicles, were deeply pigmented, and showed extensive denuded places, especially towards the ileo-cæcal valve. Abundant trichinæ were present in all the muscles and were especially numerous in those of the larynx and tongue. Everywhere they showed very transparent oval capsules with whitish opaque extremities. Professor Fischer considers that the sequelæ of enteric fever as seen in the Peyer's patches and the transformations undergone by the trichinæ pointed unmistakeably to a simultaneous infection with the two diseases by means of the raw pork. He also directs attention to the fact that although the case was under close observation no symptoms of trichinosis were perceived and the presence of the parasite would have been unrecognised during the patient's life but for the accidental removal of the piece of muscle.

VACCINATING INSTRUMENTS.

To the Editors of THE LANCET.

SIRS,—I notice in THE LANCET of Dec. 31st an illustration of a new vaccinating instrument. It seems to me that all complicated instruments, especially those with prongs, forks, or concealed needles, are very likely to become septic and must be difficult to keep clean. I have known practitioners using fork-like instruments who got a large percentage of "bad arms." In my opinion the simplest and best instrument is an ordinary needle. It can easily be made absolutely aseptic; used carefully it causes little pain; a new "instrument" can be used for each case; it is cheap, it is efficient, it is clean.

I am, Sirs, yours truly,

Jan. 2nd, 1899. F. J. L.

BEQUESTS IN 1898 AND THE LONGEVITY OF TESTATORS.

OUR contemporary the *Daily Telegraph* published an interesting article in its issue of Dec. 30th on the public bequests in 1898. Under wills reported during the past year the bequests for charitable, religious, and educational purposes amounted to between £1,400,000 and £1,500,000, which is considerably above the average of the ten years previously to 1897. That year being the Diamond Jubilee of the Queen special appeals were made and the amount that year totalled about £3,000,000. The proportion of legacies left to the different kinds of charities varies from year to year, but according to our contemporary the sum given for educational purposes last year was not so large as in former years and the hospitals in the great provincial cities and

towns do not appear to have had quite their usual share of legacies of considerable amount. About half of the total sum of the legacies of 1898 left for public uses go to hospitals and other charitable institutions. A list of 60 of the testators under whose wills charitable, religious, and educational institutions benefit to the amount of £1,089,965 out of an aggregate of £12,930,178 in personal estate is given and it is noteworthy that 37 of these testators at their death had attained the age of seventy years and upwards, while 24 were over eighty years of age. Large bequests to charities are usually those of childless persons and it is pointed out that men in business who have been liberal supporters of trade charities during their lives do not often leave money to them, that such persons have been used to regard the support of trade charities as an annual charge on the business which their successors should properly continue, and it is hoped that this will be recognised by joint stock companies.

A SEX THEORY REFUTED.

THE *New York Medical Record*, quoting the *Deutche Praxis* for August, says that Dr. Winckel has shown the invalidity of the theory that the right ovary contains the germs for the masculine and the left for the feminine offspring, by the following observation. "In 1891 a woman was operated upon for left ovarian tumour. The entire ovary was removed. Since then she has given birth to five living children three of whom are girls and two are boys."

DEATH AND STARVATION AT HAVANA.

ACCORDING to Spanish statistics the death-rate of the principal seaport towns in Cuba has in more recent times varied from 31·9 to 66·7 per 1000. In Havana the death-rate has been 36·3 per 1000, though in the suburbs of Guanabacoa and Marianao the death-rate was 39·8 and 39·5 respectively. But these figures represent the normal state of affairs and are very different from what the war has produced. From January to the end of November last year there were no less than 19,480 deaths recorded at Havana though the population of the city barely exceeds 200,000. By the end of the year there were probably over 20,000 deaths and thus we find the terrible death-rate of 100 per 1000 and perhaps more. At the same time it should be noted that the crowding of refugees into the town must have greatly increased the population. The greatest mortality was in the months of September and October when the number of deaths was double that of the three previous months. The Americans who are now commencing to organise the government of the city hope to bring about rapidly a wholesome improvement. They argue that under British rule the death-rate which at Jamaica had also reached the extraordinary average of 100 per 1000 per annum has now been reduced to 21 per 1000. Why should not the same feat be accomplished for Havana? The necessary improvements will, it is true, cost a great deal of money; but if they could be effected the result would be of great benefit politically as well as from the public health point of view. They would materially tend to reconcile the populations to the new order of things. The evils to be dealt with do not, however, consist merely of bad sanitation. Intense poverty and absolute starvation are the principal obstacles and at the present moment there are, it is said, some 30,000 people in Havana who are literally starving. Everything they possess has been sold long ago and for the sake of economy many of them are huddled together in small and unhealthy houses where dirt and insanitary conditions accentuate the fatal effects of insufficient food. The only consoling consideration which can be brought forward is the fact that probably the worst is now over and every day some improvement will be effected.

A MILITARY QUACK.

THE *Derby Telegraph* of Dec. 27th, 1898, quotes a correspondent to the fact that "there is a strong feeling throughout the medical profession in this country that the time is ripe for a new Medical Act." We are quite certain that the law should be better able to deal than it is with offenders who are found guilty of posing as medical men and the columns of the *Derby Telegraph* of Jan. 2nd supply us exactly with a case in point. It is the account of an inquest held at Derby. The deceased was a little three-year-old boy and the day before his death a Captain Fielden had given his mother some ointment to rub on his head. The mother of the child said that she did not know whether Captain Fielden was a qualified medical man, but the word "dispensary" was on his window. Captain Fielden was next called and said that he was a retired captain of the Scots Fusiliers, that he amused himself by doctoring, and examined and prescribed for children and adults in the ordinary way only making no charge. He added that he had been in hospitals and therefore felt competent to diagnose cases, that he "would give certificates for death or burial if the coroner would let him," and that "qualified men were not allowed to use good remedies like he did" as to do so was "against medical etiquette." The witness was then told by the coroner to write down the constituents of the ointment which had been rubbed on the head of the deceased just before death. Dr. W. Spettigue of Derby having informed the coroner of the real cause of the child's death said that the ointment in his opinion had not accelerated the fatal termination, evidence which for the time being saved Captain Fielden from serious consequences. The coroner has, however, reported the facts to the proper authorities and there ought to be some way of compelling the ex-officer of the Scots Fusiliers to cease from deceiving his poor ill-educated neighbours with his pretensions to medical skill.

CLUB PATIENTS AND CONSULTATIONS.

A DECISION given by his Honour Judge Bagshawe at the Biggleswade County Court on Dec. 12th last goes to show that it would be more profitable to be a cabman or a day labourer than a medical man. The case was shortly as follows: A patient belonging to a club desired a consultation between the club medical officer and a Bedford practitioner. Her husband, who was the defendant in the action, consented. The consultation was duly held and the consultant confirmed the previously expressed opinion of his colleague the medical officer of the club. The latter claimed a guinea as his fee, but the judge, although holding the defendant liable, only allowed a fee of five shillings. The defendant is an innkeeper and market gardener; he lives close upon three miles from the medical man's house, and the latter spent the whole morning in attending to the consultation. Now, an ordinary cabman in London would get for driving six miles, 3*s.*; for waiting one hour, 2*s.* 6*d.*; total, 5*s.* 6*d.* Professional skill and knowledge are apparently at a discount in Bedfordshire—that is to say medical skill, for we are certain that legal advice could not be obtained so cheaply. This case is only one more example of the abuse of clubs and the pass to which medical men have been brought by doing acts of kindness. There is no profession more ready to work for nothing than our own, and charity has at length come to be looked upon as a right. The artisan class has obtained many benefits for itself by organisation; it remains for the medical profession to do the same. The nobility of character and the consciousness of duty done are all very well, but a man cannot live by these alone and in these days when he has to provide not only for his own wants but for those of other people and their children a fair day's wage for a fair day's work is a necessity.

P. V.—In some country districts the fees are clearly too small and we have recorded examples where the guardians have agreed to raise them.

Sixteen must consult a medical man and it would be as well to do this with the concurrence of her mother or some female relation.

Viator.—We recommend "Elementary Practical Bacteriology" by the late Professor Kanthack and Dr. J. H. Drysdale.

M.R.C.S. (Worcester) should try a soft answer, though he could justify a reply in a different spirit.

M.D. Bruz. has given a wrong reference, nor can we ascertain to what article he is alluding.

Randall.—"The Sanative Influence of Climate" was written by Sir James Clark, M.D.

M.R.C.S. (Brighton).—We have seen the style employed, but we do not approve of it.

L.T.A.—There will shortly be a cheap re-issue.

Sufferer should consult his medical man.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 5th, 1899.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Dec. 30	29·64	N.	...	63	44	41	39	42	Cloudy
,, 31	29·74	S.E.	0·28	46	46	33	36	38	Cloudy
Jan. 1	29·33	S.W.	0·08	52	43	38	38	39	Cloudy
,, 2	28·84	S.W.	0·14	56	43	38	38	40	Cloudy
,, 3	29·67	N.	0·02	59	49	38	40	42	Cloudy
,, 4	29·97	S.W.	...	65	55	42	49	49	Overcast
,, 5	30·26	WNW	...	55	46	41	41	42	Hazy

During the week marked copies of the following newspapers have been received: *Kidderminster Shuttle, Dundee Advertiser, Hull News, Newcastle Chronicle, Manchester Guardian, West Middlesex Advertiser, Pioneer Mail, Times of India, Isle of Ely Advertiser, Architect, Scotsman, Yarmouth Advertiser, Builder, Bristol Mercury, Citizen, Hastings Chronicle, Isle of Wight Times, Liverpool Daily Post, Cornish Telegraph, Brighton Gazette, Grimsby Observer, Southport Visitor, Alnwick County Gazette, Leeds Mercury, Durham Chronicle, Harrogate Advertiser, Birmingham Gazette, Bridgwater Independent, Midland Counties Express, Bath Chronicle, East Sussex News, Cheltenham Examiner, Keene's Bath Journal, Portsmouth Times, East Essex Advertiser, South Wales Daily News, Eastern Morning News, Cambridge Express, Loughborough Herald, Weekly Free Press and Aberdeen Herald, Sanitary Record, Mining Journal, Local Government Chronicle, City Press, Reading Mercury, Hertfordshire Mercury, Local Government Journal, Surrey Advertiser, Western Mail, Daily Telegraph, West Lothian Courier, Yorkshire Post, Halifax Borough Advertiser, Guernsey Mail, Kettering Guardian, Newark Advertiser, Penarth Chronicle, Runcorn Weekly News, Derby Daily Telegraph, &c., &c.*

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